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ORIGINAL LECTURES.

THE OPPOSITION TO EXPERIMENTS ON ANIMALS.

Extract from the annual oration "Impediments to the Progress of American Surgery," delivered before the Academy of Surgery of Philadelphia, January 4, 1886.

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GENTLEMEN: Whilst government aid is withheld from aiding surgical progress, legislation is being actively sought actually to hinder scientific investigation in certain directions. I believe that experiments on the lower animals are essential to the advancement of the science and art of surgery. The resolution adopted by the International Medical Congress of 1881, the largest and most widely representative assembly of medical men the world has ever seen, was: "That this Congress records its conviction that experiments on living animals have proved of the utmost service to medicine in the past, and are indispensable to its future progress. That, accordingly, while strongly deprecating the infliction of unnecessary pain, it is of opinion, alike in the interest of men and animals, that it is not desirable to restrict competent persons in the performance of such experiments." Such men as Virchow, Owen, Huxley, Carpenter, Paget, and Pasteur, have affirmed that "the remarkable advance in medical science and art, during the last twenty years, is due to experiments on the lower animals.

In reviewing the fanatical opposition to physiological experiments on animals it is evident that medicine is a shining mark for the shafts of detraction. A return, recently published, for the year 1883, showed that such experiments were performed in England, Scotland, and Ireland by only thirty-six persons. The inspector's report presents the conclusion that "the amount of direct or indirect suffering from the performance of physiological experiments during the past year was wholly insignificant, and limited to about fourteen or fifteen animals." Dr. Yeo, of King's College, London, says that "we learn from the reports that in 100 vivisections we should find the following numbers arranged to show the amount of pain inflicted:"

Absolutely painless	75
As painful as vaccination	20
As painful as the healing of a wound .	4
As painful as a surgical operation . .	1

No experiments that would cause pain were performed without anæsthesia, excepting a few hypodermatic injections or inoculations with morbid matter, and which were not more severe than a slight needle puncture or a simple vaccination. And yet this well-guarded and humane work has in Great Britain, met with the most vicious misrepresentation and fanatical abuse, and even its absolute and total prohibition is demanded.

It is evident that the fanatical tirade against physiological experiments on the lower animals is simply a Quixotic fight against a word, a name—the unfortunate and often misapplied word, vivisection. The word seems to be used generically to include every physiological experiment that may be performed on an animal, even the simplest and absolutely painless.

A speaker at a recent meeting of the American Society for the Restriction of Vivisection, defined vivisection to be, "the cutting, flaying, pinching, burning, crushing, tearing, bleeding, disembowelling, maiming, and eviscerating generally of living animals." A writer on the subject says: "The very word vivisection is sharp. It is smooth and highly polished, with a keen cutting edge. It tells of a helpless, suffering creature under the steady hand of a pitiless dissector. The skin is flayed away, the quivering flesh carved off, the nerve-trunk pierced with needles, the bare bone sawed asunder. The cries of bitter agony are unheard by the stern operator; the resisting struggles have been foreseen and forestalled. The ghastly work goes steadily on, until, after a while, the silver cord is loosed and the golden bowl broken, and then, at last, all is silent and still."

The disordered brain of another fanatic describes vivisection "as sawing across the back bone, dissecting and irritating the great nerves, driving catheters along the veins and arteries, inoculating with dreadful diseases, cutting out parts of the intestines, stewing and baking in a stove, pouring boiling water into the stomach, boiling or freezing to death, and by mechanical processes reducing the brain to the condition of a recently ploughed potato field." Another violent opponent asserts that one eminent medical authority disapproves of the use of anæsthetics because "an experiment is made more satisfactory when the animal exhibits signs of pain." Cardinal Manning gives the opinionated statement that experimenting on animals "is a detestable practice, not attended with any scientific results;" and Chief Justice Coleridge dogmatically asserts that "the practice is displeasing to Almighty God."

At the meeting referred to, of the American Anti-vivisection Society, one, said to be a medical man, communicated his views by saying that, "unrestricted vivisection should only be tolerated in a community of devils." A speaker at the meeting made the exaggerated statement that "thousands of animals are yearly sacrificed in order to show to students what is stated in their text-books is true." A medical speaker next said, referring to a case of severe illness in his own family, "that vivisectors are less capable of managing such diseases than ordinary intelligent physicians . . . . visionary in their ideas, prejudiced in their aims, and illogical in their conclusions." Another medical speaker said, "the argument of the vivisectionist is that he learns to save men by flaying and disembowelling brutes. An experiment," he said, "is to thrust a trocar into an animal's heart, causing the blood to spurt five

or ten feet, and the students are asked to notice how far the action of the heart expels blood." And this same speaker, who tells us of the fondness of medical men for all this brutality, gives us to understand that their bloodthirstiness is not limited to the sufferings of brutes. He says, "the amphitheatre of my own lecture-room is crowded whenever I have to perform a surgical operation which covers the floor with blood for an hour or two; but when I bring all the resources of what I have been able to gain from a life of study, that would do away with the necessity for such an operation, I find that the amphitheatre is about half filled. Let it be known that a surgeon is going to cut some poor sufferer for a couple of hours, and an operating room is crowded."

With such inflammatory and specious trash is the fanatical flame fed, and the noblest and most humane of all human occupations is insulted and traduced. Truly, detraction does love a shining mark!

It is to be regretted that the most of the sensational misrepresentations in regard to experiments on animals have been spread before the community by members of the medical profession. From the most insensate indifference to the unnecessary sufferings of animals everywhere about us, merely for the sake of our pleasures or caprices, the community has had its tenderest and most humane sympathies aroused to a hyperæsthetic pitch.

Among the sympathizing audience at the meeting referred to, whose hearts were in such anguish, horror-stricken at the recital of medical atrocities, sat some with feathery decorations, to yield which many birds had been painfully slaughtered, or from whose living and bleeding bodies the plumage had been torn. The night of meeting was midwinter, and many fur-bearing animals that had died by gunshot wounds or had perished after struggling for life, in traps, contributed their pelts for the sake of comfort or fashion. But all this unheeded suffering, at the price of blood, was inflicted far away, and it mattered not, for the wearers had nothing to do with it. Perhaps some of the sympathizers with brute suffering had been at dinner "with good capon-lined," and, after being drawn homeward by emasculated equines, would sup on terrapins that had met death in its most horrible form, by the customary practice of scalding. But this is only an every-day, household practice of vivisection by the cook, and not by the doctors; and so neither societies nor legislation are required for prevention.

Whilst on this subject, it occurs to me to quote Sir Henry Thompson's comments in regard to the popular vivisection of the Strasburg goose, with its feet fastened to a board near a fire, and stuffed until its hypertrophied and fat-degenerated liver becomes a luscious morsel for the "pâté de fois." He says, "I would strongly commend the condition of these poor brutes to the consideration of the antivivisection society, since more disease is produced among them, in order to furnish our tables with the 'pâté,' than by all the physiologists in Europe, who in the interests, not of the human palate, but of human progress, as effected by therapeutic knowledge, sometimes propagate and observe certain unknown forms of disease amongst a few of the lower animals."

It is admitted that in experimental investigations, performed on the lower animals, the infliction of pain may in a few and rare instances, be unavoidable; but it seems remarkable that those few cases should attract so much exclusive sympathy whilst millions of instances of the most relentless and unnecessary cruelty continue to be inflicted without an appeal from humanity. No cruelty practised elsewhere throughout the world equals the sufferings of cattle in the winter season in our Western States and Territories. A writer in a recent agricultural journal says: "Cruelty to animals in the city of New York, in its extent and enormity, compares with cruelty to animals in the great West as an infant's breath compares with an Arctic blizzard. Millions on millions of cattle, warm-blooded, sensitive—that jump at the prick of a pin—are turned out by the remorseless owners to gather scant herbage where snows and frosts and fierce winds make life a protracted agony. Does anybody doubt that domestic animals suffer intense pain when exposed, without protection, to an atmosphere five to fifty degrees below zero? In those regions hundreds of thousands are turned loose without shelter and without food, except such as they can gather in the frosts and snows and fierce winds that torture and often terminate the lives of men and beasts. They have buffeted the storms of this terrible winter, and now, with sunken eyes and bended backs and protuberant bones, are lying down to sleep their last sleep, and have passed through the intensest agony animal life is capable of."

"Let the same protracted suffering, the same degree of torture be inflicted by some new process, some unaccustomed method, and we would denounce it with one accord. If cattle never had been forced by cruel owners to gather their living where a decent living could not be found; if never before had they been compelled to make their beds in snow, when the thermometer was below zero, and the wind like a scourge of thorns, the first man who deliberately put them to that torture would be pronounced a 'monster of cruelty.' The birds which go south in winter, and the buffalo that migrates to milder regions as cold weather comes on, are far wiser than the herdsmen who force their stock to buffet the almost arctic winter, preventing them from wandering to milder climates if they could."

Mr. John Bright, of England, is authority for the statement that sixty thousand camels perished by starvation and suffering during one of the Afghan wars. It is estimated that half a million of pigeons are yearly shot from traps in Great Britain for the sake of mere sport. Whilst in southern Florida, last spring, I met a professional bird hunter who had recently sent to a northern market the ornamental plumages of nine thousand birds, and during a number of previous years accomplished about the same—an enormous vivisection for Fashion's sake!

So the enormous cruelties to animals, by exposure, goading to labor, branding, castrating, plucking of feathers, stuffing to produce disease, and painful methods of slaughter, continue without attracting more than very slight attention.

Such vast cruelty that is passed by with disregard and apathy, when contrasted with the intense sympathy for the occasional suffering of an animal, inflicted in a humane cause, impresses one with a curious antithesis that exists in human nature. The collective commission of extreme sins by great numbers is overlooked, whilst

a small transgression by one individual meets with universal execration. The collective homicides of war are applauded as but attractive romance, whilst only single-handed murder is properly abhorred.

In an address on vivisection, Dr. Keen, one of the Fellows of this Academy, well said, "To grow better, we must try new methods, give new drugs, perform new operations, or perform old ones in new ways; that is to say, we must make experiments. To these experiments there must be a beginning; they must be tried first on some living body, for it is often forgotten that the dead body can only teach manual dexterity. They must be tried either on an animal or on *you*. Which shall it be? In many cases, of course, it is perfectly legitimate to test probable improvements on man first, although one of the greatest and most frequent charges against us doctors is that we are experimenting upon our patients.

"But in many cases they involve great risk to life and health. Here they cannot, nay, they must not, be tested first upon man. Must we, then, absolutely forego them, no matter how much promise for life and health and happiness they possess? If not, the only alternative we have is to try them on the lower animals; and we would be most unwise, nay, more, we would be cruel, cruel both to man and to animals, if we refused to pain, or even to slay a few animals, that thousands, both of men and animals, might live."

"Who would think it right to put a few drops of the hydrochlorate of cocaine, a year ago almost an unknown drug, into the eye of a man, not knowing what inflammation, or even loss of sight, might follow? Had one dared to do it, and had the result been disastrous, would not the law have held him guilty, and punished him severely? But so did Christison with Calabar bean, and well-nigh lost his own life. So did Toynbee with prussic acid, and was found dead in his laboratory." The wonderful and unique properties of cocaine were first tested on animals, and its beneficent application to human suffering soon followed.

We cannot believe that all those totally opposed to experiments on animals have the wicked intent of stopping all surgical progress, but some would simply prefer that the investigations should be made on human beings—of course, on others than themselves. To such, the recent earnest proposition to utilize condemned criminals for cholera experiments should find a congenial response. The *Indian Medical Gazette*, of last September, states that from three hundred to four hundred persons in India are judicially sentenced, every year, to suffer death; that, taking one day with another, not a day passes without the execution of one individual. So the material for human vivisection is abundant, and ready to present itself voluntarily, as commutation of the death sentence is proposed to the victims who may be so fortunate as to recover.

As to the oft-repeated assertion that nothing has been gained to science or to humanity by experiments on animals, it cannot be denied that to such manner of investigating is due our knowledge of the means of relieving human suffering by some of the most valuable anæsthetics and by hypodermatic injection; and so, also, has been discovered the action of most of the new remedies that have been added in the last twenty years, such as chloral, nitrite of amyl, nitro-glycerine, iodoform, eserine, caffeine, jaborandi, paraldehyde, antipyrin, and cocaine.

So far as legislative restriction of experiments on animals is concerned, I believe that the members of the medical profession need no legal restraint, and that the matter may well be left to their humanity and honesty of purpose. If experiments on animals should be performed by improper persons, wantonly and without scientific and humane objects, then the existing statutes against inflicting cruelty are all-sufficient.

If legislative restriction were really needed to satisfy sentimentalism, the bill, as presented at the last session of the Pennsylvania Legislature, is not, in its provisions, objectionable; and there was a general consent to the bill by those in the profession who take the greatest scientific interest in its subjects. But it was distinctly understood that this consent was with the agreement that further agitation of the subject should end with the passage of the bill. To this the advocates of the measure would not consent, and it is evident that they intend to continue to agitate and appeal for the absolute prohibition of experiments on animals. The same unsatisfied and violent opposition continues to exist in England since the final adoption of the laws on the subject.

ORIGINAL ARTICLES.

A CONTRIBUTION TO THE STUDY OF HAY FEVER (SO-CALLED).[1]

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THE pendulum never swings in one direction too far, unless it goes out of the way in the opposite direction almost to an equal extent. As applied to our appreciation of the real nature and correct treatment of so-called hay fever, this statement is specially illustrative, and as true as any dogmatic affirmation can be in matters medical.

Not very long ago, scarcely anyone thought of a different etiology of the painful periodic paroxysmal attacks of sneezing, coughing, and dyspnœa characterizing this disease from that which inheres in the vitalized pollen granule of flowering plants and grasses. At present this external irritant is regarded by the most advanced workers in rhinology merely as one of many local excitants, and among these as possibly by no means the most active. Changes of temperature, of light, of winds, of electricity and barometric pressure, are said equally to hold a determining influence in bringing on these attacks. Yet none of these external agents is sufficient to produce hay fever, unless there also be present a highly excitable vasomotor centre. This nervous centre may have become diseased primarily, so that the slightest direct or reflected irritation, whether it be from an external agent, bodily disease, or psychical impression, may be sufficient to render it unduly excitable, and thus give rise to the combined symptoms of hay fever. Numerous experts, however, have now come to regard the main source of this disease as being in the nasal fossæ. Normally, as

[1] Read before the Section of Laryngology and Rhinology of the New York Academy of Medicine, Jan. 22, 1886.

we know, these passages are irritable; but this degree of sensitiveness is inadequate to cause attacks of hay fever, something more is required. There should be at least a hyperæsthetic condition of the pituitary membrane, or marked morbid changes under or about it should be present. From this standpoint, the whole category of nasal affections has been gone through with before one has finished counting proximate causes of hay fever. This ultra view would not be so objectionable were it not that the immediate consequences to *noses* are disastrous. Everyone is seized with an inordinate desire to operate, and whenever hay fever victimizes a patient, a deviation of the septum, or the slightest turgescence of the turbinated bodies, is immediately shown to be the origin of the trouble, and forthwith radical measures are adopted to rid the patient of structures which are often in reality inoffensive. True it is, however, that an individual frequently does suffer from an intra-nasal condition, which at a given stage is undoubtedly a most important factor in the production of paroxysms of hay fever. Of this fact there can be no contention at the present time, if due consideration be given to the numerous and convincing reports of competent observers. Yet, and perhaps more for this reason than another, it behooves every specialist to be watchful, and *not* willingly to admit that there is no hay fever, unless there be pronounced nasal disease, and that by nasal treatment *solely* this disease can always be obviated or arrested. Already I have seen more than one case which has convinced me how incomplete and erroneous such a view certainly is, and as a further study of this disease I would direct attention to the following facts and remarks:

First. A patient of mine who had had during several years repeated attacks of hay fever, accompanied by conjunctivitis, sneezing, asthma, etc., was affected last summer in a similar manner, about the same period as usual. After these annual attacks had subsided, and until the following year at the same date, my patient had no symptoms of nasal disorder, or of other bodily disease which predisposed her to hay fever, either by direct or reflex irritation. Upon reviewing her history carefully, her attacks were shown to be brought on on each occasion by rapid and considerable changes in the temperature and moisture of the ambient atmosphere.

Second. A gentleman is now under my care who has nearly complete occlusion of both nasal passages. evidently occasioned by hypertrophy of the turbinated bodies, and particularly of the posterior portions of the lower bodies. Until one year ago, and during many previous years, at which time his nasal passages were only partially obstructed by reason of hypertrophic enlargement of the turbinated bodies, there were annual attacks of hay fever. At present, when his nasal passages are almost impervious to air, a great portion of the time the hay fever attacks have entirely disappeared. If the sensitive area of J. H. Mackenzie were in this instance at fault—*i. e.*, the posterior part of the septum and lower turbinated bodies—the attacks of hay fever would probably have persisted and not completely stopped as they have.. If Harrison Allen's doctrine that occlusion of the nasal passages is the secret of such attacks can be sustained in many examples, in this one it proves to be insufficient at an advanced stage of the disease to explain the absence of an important series of symptoms. Add to the case referred to by me, two cases reported by Sommerbrodt, in which turbinated hypertrophy existed and the galvanocautery was applied locally in a thorough manner. Despite this operative procedure, the attacks of hay fever occurred with their usual severity.

Third. Nasal polyps may or may not be found in patients who are sufferers from hay fever. When they are present, their removal has frequently been followed by relief from painful recurring paroxysms of this disease. In a number of cases, one of which has come under my notice, the polyps were radically removed without, to any apparent degree, influencing advantageously the return of attacks of an analogous kind either as regards their intensity or frequency. In my case cough and dyspnœa at least were evidently more nearly dependent on a fibroid condition of the lungs and dilated air cells, than they were on a previous condition of nasal obstruction occasioned by polyps. Indeed, the case was really one of bronchitic asthma and emphysema, and not of hay fever. And here it is worth noting what I have certainly observed more than once, that sufferers from bronchitic asthma are also affected at times with a marked degree of nasal obstruction due to nasal catarrh, thickening of the septum, or some other morbid state of the nasal passages. The attack of asthma in these cases frequently begins in the nose and works its way downward until, within a few hours, the constant sneezing, inability to draw air through the nose, watery congested conjunctiva, and contracted bronchi, accompanied by noisy stertorous respiration, approximate them closely with those who are true victims of hay fever. So far as mere symptoms of disease are concerned, how such cases can be distinctly separated from examples of hay fever, I should be unable to say. Of course, when an accurate physical examination is made, the intrapleural and pulmonary conditions are such that we are no longer permitted to doubt as to the true pathogeny of the disease we are called upon to treat. And in the treatment itself we also find verification of our diagnosis, since remedies which remain with little or no effect upon the thoracic dyspnœa of hay fever are of great utility in allaying this symptom even though considerable and chronic structural changes be shown to exist within the thorax. I am glad to note that a distinguished English authority, Sir Andrew Clarke, in the January number of the *American Journal of the Medical Sciences*, points to a view which I have for some time distinctly held—*i. e.*, the close relationship between these two forms of disease. In a series of propositions this author sets forth what he regards as the teaching of a study of hay fever, concerning the pathology of bronchial asthma, holding that it is a neuro-vascular trophic disease, and has its origin in a special vulnerability of the respiratory mucous membrane, of the respiratory nerve centres, and of certain portions of the sympathetic. So it is doubtless in just such instances that we should appreciate how uncertain, and even useless at times,

mere local treatment of the nasal passages will become. Even the galvanocautery cannot be expected to reach the primary source of disease, as the "roots of special vulnerability" are in the bronchial tubes, not in the nose itself. My experience, I am much gratified to find, is in accord with that of Da Costa (MEDICAL NEWS, March 9, 1885), Cohen (*American Journal of the Medical Sciences*, Jan. 1885, p. 309), and others. In severe cases of hay fever the asthmatobronchitic manifestations are often unrelieved or but slightly modified by the local use of cocaine, despite the allaying of pruritus, or the *temporary* reduction, at times, of nasal intumescence.

Fourth. In the very large number of nasal affections which are seen in our clinics for treatment of this class of cases, the proportion of those who have had attacks of typical hay fever is relatively small. If this statement be admitted, and it cannot be seriously questioned by anyone who is really familiar with facts of this nature, it is obvious that the morbid intranasal condition is only efficient as a factor in producing hay fever when a predisposition exists which enables certain exciting agents to produce the malady in one class of persons, and yet entirely fails to produce it in others. Again, that these exciting agents are in a remarkable manner *specialized*, seems also proved, since emanations which in one person provoke a severe attack, produce in another, liable to hay fever, no sensible effect. The association of ideas may also awaken a paroxysm of vasomotor coryza, as we find an example in a case of "the production of so-called 'rose cold,' by means of an artificial rose," lately reported by Dr. John H. Mackenzie,[1] of Baltimore. In this, and other somewhat analogous cases, in order to produce such a result there must probably be "a deranged mental impressibility," in addition to an irritable condition of the turbinated bodies. Yet, despite these statements, it is now clearly determined, and widely recognized, by many careful, expert physicians that at or about a certain period of each year these attacks are sure to take place with some individuals, unless they have been submitted previously to suitable local treatment of their nasal passages. Even to this category, however, there are some exceptions, for, as it has already been stated, a few hay fever patients have proved to be wholly refractory to this local treatment, and their paroxysmal attacks have recurred as before, unless they have banished themselves for a time to a particular locality among the mountains, or at the seashore.

Of these two classes of sufferers, we can truly say, the first undoubtedly have nasal disease of some kind, and that the others are entirely free from it in any form, or are affected by it in such a way that we cannot determine its existence by our usual methods of examination. That the first class should be treated systematically for nasal disease is rational and judicious, and owing to wise treatment such benefit will frequently result that they are completely cured, so that they can expose themselves with absolute impunity to all causes which formerly occasioned their attacks. In the second class, continued or energetic treatment of the nose is irrational and should not be carried on, unless it can be reasonably shown that the nerves of the pituitary membrane may be morbidly altered despite our ability to affirm the change except through proper deduction from knowledge of the course and results of treatment in analogous affections of adjacent organs, the structure of which is not unlike. This being admitted, my explanation may now be offered: I do not believe that previous to the time of the attack of hay fever a *morbid intranasal condition*, recognizable by our explorative tests, is invariably present. Yet I am of the opinion that, even in these instances, morbid changes affecting the peripheral nerves may be responsible for the occurrence of symptoms of the disease. These morbid changes I assume to be in their nature *neuropathic*. They are probably inflammatory at times, and not less frequently are, doubtless, such as characterize atrophy of the nerves, or a thickening of their sheaths. I can appreciate the objections which will be immediately urged against this view. What proof have you? In reply I would say, I have just the same degree and kind of proof that I possess for the existence of many neural diseases elsewhere situated. Direct pathological proof, such as the microscope alone can ordinarily afford, I have not. But proof sufficient from the close study of the disease, belongs to me as to others. And this, in the interpretation of hay fever, must be for the while satisfactory, since it is all we have hitherto acquired. In the class of cases to which I refer we can appreciate how there may be hypersensitive areas distributed more or less widely over the pituitary membrane. These sensitive points may then be readily distinguished by contact with a probe or other foreign body. Inasmuch, however, as *irritable areas* cannot *invariably* be discovered in advance of an attack of hay fever (and this statement is the expression of my own clinical investigation), and other sufficient evidences of a determining intranasal causation of these paroxysms are not present (unless my view be adopted), it is logical to infer that if the nasal condition is really the efficient and primary cause of the attacks, it must be owing to an obscure neuropathy (translation of our ignorance) which merely renders the peripheral nerves sensitive to *special* irritants, and yet is only a functional disturbance. The symptomatic condition referred to is, moreover, not unlike one that often occurs in the pharynx, and which I interpret in nearly the same way that I explain some phenomena connected with hay fever.

At present, for example, an adult patient is under my care, in whom the sensation of pharyngeal pains is felt only during the time *cold* air is respired. Pressure, moderate in force, speech, song, deglutition, etc., do not occasion any unpleasant sensations whatever. It is to a certain degree appreciable, therefore, reasoning from analogy, that a paroxysm of hay fever may be induced by very many external irritants, which act primarily through contact with the pituitary membrane, although the proof we discover of nasal disease is limited to (1) the obvious effects of external agents of various kinds; (2) the results derived from the use of topical treatment. If this belief be accepted, it can be easily understood

[1] American Journal of the Medical Sciences, Jan. 1886, p. 57.

that, according to the cause of the attack and the nature of the peripheral nerve changes in the nose, either a local anæsthetic, like cocaine, an alterative, like iron, a mild chemical cauterizing agent, like carbolic acid (as I have elsewhere stated), or the galvanocautery may each or all prove sufficient to bring the attack to a rapid close, if it have already begun, or prevent its occurrence when applied in advance, and in view of the local conditions we are required to treat. The relative utility of the different local agents just mentioned will frequently depend on the nature and situation of the pathological changes in the nose, as well as on the degree to which, if any, they are accountable for the hay fever attacks. In this connection I would cite the judicious remarks of J. Solis Cohen, who, after alluding to the different means employed in removing morbid intranasal conditions, says, "Destruction, however, is not cure, and the production of unnecessary cicatrices may prepare the ground for less benign disease in the future. While instances of permanent relief by these methods are sufficiently numerous, the fact cannot be ignored that cases of *reported cure* are sometimes compelled to seek treatment for recurrence. The choice between reliance upon a satisfactory palliative or resort to operative interference in the chance of permanent relief must be settled between patient and physician" (*American Journal of the Medical Sciences*, Jan. 1885, p. 310). I believe, however, that we have no agent so generally useful as the electrocautery in alleviating or curing cases of hay fever of nasal origin; yet there are cases, especially those of bony obstruction, to which it is altogether inapplicable. In view of a case of intense paroxysmal sneezing, which had lasted for several years, and was probably dependent on, and certainly allied with, a complete obstruction of one nasal passage, mainly by deviation of the cartilaginous septum, and because in this case I made a successful use of the galvanocautery, I am now disposed to include such cases among those occasionally suitable for this treatment. The galvanocautery is, of course, particularly indicated in all instances of considerable or complete occlusion occasioned by hypertrophy of the intranasal soft parts. While I commend the galvanocautery thoroughly in almost all *these* cases, and regard it as greatly preferable in ease of application and subsequent beneficial results to the use of the cold wire snare, I continue to believe that in less aggravated forms of obstructive disease, the hay fever paroxysms may be almost equally well treated by such means as pure carbolic acid or chromic acid. In favor of the primary trial of these agents may be mentioned the facility with which they can be employed, and their less destructive action.

Fifth. Before recognizing the dominant influence of intranasal conditions in determining hay fever attacks, it is essential to question the patient closely, and endeavor to discover if there be any other local or systemic disorder present, which might render doubtful the accuracy of the diagnosis. Of course, if any such disease be found it must first be carefully treated, and until it is fully eliminated in this, or some other manner, as an efficient factor in causing hay fever attacks, we cannot properly estimate the direct power in this direction of the morbid intranasal conditions.

Sixth. In this view, that remarkable protean nervous disorder—central vasomotor disease—should not be overlooked, although our ability precisely to locate it is frequently insufficient. These nervous centres have played an important though exaggerated *rôle* in the physiological interpretation of diseased action during the past ten years or more, and no doubt, partly on this account, many persons are sceptical as regards their influence, whenever it is now alluded to. I am disposed to believe, however, that their control in this disease will always be notable in a considerable proportion of cases, although the extent to which it is exercised is not yet clearly and entirely appreciated in every instance. When, however, it is recognized as being present, it will usually be correct to state that, in these instances, mild topical applications to the nose for the purpose of aborting or preventing attacks of hay fever will prove almost useless. Even though this be true, there will still remain a few among these examples, in which cauterization by means of the galvanocautery, will be curative where the previous means have proved inadequate The full explanation of this fact is doubtless that the cautery reaches and destroys more thoroughly all the morbid tissues and thus abolishes receptivity through the nose, of irritation from numerous foreign substances which previously had acted as excitants of an impressionable nerve centre directly related to the olfactory organ. Of course, when the excitant is purely a psychical condition of which the resultant, so to speak, in a physical way, is the temporary engorgement of the turbinated bodies which gives rise to the different rational symptoms of hay fever, all local medication is to a great extent delusive and unsatisfactory, and at best only palliative.

To sum up this brief paper in reference to hay fever (so-called), I wish to add that I had a single purpose before me in writing it, and that purpose was simply to prevent, if possible, the present current of medical opinion carrying us too far in a right direction, and making us regard every sufferer from hay fever as a case either for somewhat severe nasal operation or continued nasal treatment. Many there are amongst these unfortunates who have no specially sensitive areas to cauterize, no occlusions to destroy, no abnormal septa to cut away, no catarrh to treat. They are simply individuals who, unless evident pathological conditions betray the origin or source of far-removed nasal and other phenomena included in the term hay fever, are still for me obscure neurotics or neuropaths, or those who are *specially* influenced by pollen granules, or by *one* or *more* of a vast number of emotional or psychical influences, external irritants, or *atmospheric conditions*. Nor do I consider it a *retrograde movement* at this time to make such a statement, but rather the act of throwing called-for *weights* into one side of a balance to make *equipoise*, when almost all late observers have been contending in favor of a sound but, in my judgment, too exclusive theory, which is insufficient to explain all cases of hay fever satisfactorily.

THE MORTALITY OF THE CÆSAREAN SECTION,

WHEN THE CONDITION OF THE SUBJECT IS FAVORABLE, AND WHERE THE UTERINE WOUND IS SUTURED SO AS TO RENDER IT IMPERVIOUS TO FLUID, AND TO SECURE AN EARLY UNION OF ITS SEROUS COAT.

BY ROBERT P. HARRIS, A.M., M.D.,
OF PHILADELPHIA.

IN the last American edition of Playfair's *Midwifery*, prepared a little more than a year ago, will be found the following under the heading of "Possibilities of Gastro-hysterotomy:" "Old as it is, the Cæsarean operation is still upon trial, and has by no means attained the minimum mortality of which it is capable under modern improvements as one of the forms of abdominal surgery." When this was written the new method of uterine closure, devised by Dr. Sänger, of Leipzig, was just beginning to attract attention, and it was known to the writer that Dr. Leopold, of Dresden, had operated three times by this plan, with entire success to mother and child. What I then hoped for by this improvement has been more than realized in the Maternity Hospitals of Germany, and I now have the pleasure of presenting a tabular record of sufficient extent to warrant the claim that the old operation performed in good season and with careful uterine closure is by no means "the most dangerous operation in surgery," as was once claimed by a prominent gynecologist before the American Gynecological Society; but is even less fatal than craniotomy in badly contracted pelves. In view of this German record, we cannot endorse the recently expressed claim of Mr. Lawson Tait, that the Cæsarean operation has a mortality of over 99 per cent., and that the hope of the future is in the comparatively safe method of Professor Porro.[1] Thus far there is no general or hospital record in any country to compare with the one herein given. Under the first 28 Porro operations, 18 women were lost, although all but 5 of the children were alive at delivery; and under the first 28 of the second hundred, 16 women and all of the children but 6 were saved; against which we place the saving of 19 women and 24 children out of the first 28 Sänger cases at home and abroad. The best Porro record in any European maternity is that of Milan, where cases 1, 2, and 9 were fatal in a list of 14, under five operators. Under three operators in Leipzig and two in Dresden, the Sänger method shows a record of 6 women and 6 children saved in one maternity by 6 operations, and 9 women out of 10 in the other, with all of the children. The whole record of Germany foots up 21 operations with a loss of 3 women and 1 child.

We are sorry not to be able to write more encouragingly about our own portion of the table, which is rather a dead weight upon the balance; but the fact is, that with but one exception, and that was a cancer case, the prior condition of the women gave the operators little or no hope of success. It is the old story here, try every possible obstetrical expedient first, and then "the forlorn hope" of the knife.

[1] British Gynecol. Journ., May, 1886, p. 19.

Having adopted by degrees the British estimate of the dangers of the Cæsarean section, we have very naturally as the result of dreading its effects, increased our mortality almost to the English measure. This is shown by the changes in our statistical record. We have had, so far as known, 142 operations in the United States. Of the first 70, down to 1866, 37 resulted in the recovery of the women; and of the balance, 72, only 17 had a favorable result. Of the first 70 children, 35 were lost, and of the 72, 42 were found dead. Of the 70 there were 23 *timely* operations, saving 20 women and 20 children; and of the 72, only 10, undertaken early, saving but 3 women, although 9 of the children were extracted alive. By the increased mortality of the last twenty years, we have reduced the percentage results of timely operations from 75, or 21 saved out of 28, to 69¾, or 23 out of 33; and the general average of recoveries from 52¾ per cent, to a fraction over 38 per cent. It is quite time, therefore, that we should follow the example of the German rather than of the English operator.

In the Cæsarean operation we have really more to fear from the condition of the patient prior to the use of the knife than from the surgery *per se*, and in making a prognosis much will depend upon the answers to the following questions: 1. Is the woman a dwarf? 2. Are her powers of endurance below standard by reason of having been rachitic in childhood? 3. Has her strength been wasted by long-continued uterine action? 4. Has she been subjected to attempts at delivery by the forceps, turning or craniotomy? 5. Has the fœtus died from uterine pressure, and if dead, has it become putrid? 6. Has it been partially delivered by turning or decapitation? 7. Is the woman syphilitic? 8. Are her kidneys unsound, showing albumen or pus in her urine? 9. Has she a uterine or pelvic tumor? and 10. Has ergot been administered? If all of these can be answered in the negative, there is but comparatively little risk in the operation in the majority of cases.

Rachitic dwarfs very soon become exhausted by labor, and require for safety that the operation should be performed as soon as the os uteri is sufficiently open for drainage. Tumor cases are apt to end fatally, but there have been some very exceptional examples in the United States. Cases of impaction of the fœtus in the pelvis in healthy women have generally recovered in our country, even when the labor has been of long duration. This is to be accounted for by the robust condition of the subject and her normal powers of endurance.

The Sänger method of operating requires for success that the woman should be in a *favorable* condition, and that she should not by delay or futile expedients have lost her child. It requires on an average one and a quarter hours to perform the operation, most of this time being expended in securing the uterine wound against the possibility of leakage. This avoids one serious element of danger in the old operation, which depended largely for safety upon the continuance of uterine contraction; secondary inertia and gaping of the wound, often resulting in the escape of fluid into the abdominal cavity, and the consequent death of the patient.

RESULTS OF THE CÆSAREAN OPERATION, AS MODIFIED BY DR. SÄNGER, OF LEIPZIG, AND SIMPLIFIED IN ITS PERFORMANCE BY DR. LEOPOLD, OF DRESDEN, AND OTHERS.

No.	Date of operation.	Operators.	Locality.	German cases and deaths.	Age.	Number of pregnancy.	Conj. diam.	Cause of difficulty.	Time in labor.	Conditon of woman at time of operation.	Treatment of muscular edge of uterine wouud.	Uterine sutures. Deep	Uterine sutures. Superficial.	Result to women.	Result to child.	Time of survival, and cause of death.	References.
1	May 25, 1880	Dr. G. Leopold	Dresden	1	29	2-para	2⅜ in.	Rachitic pelvis	About 12 hours	Favorable	Resected	8	12	Recovered	Living	R.	Archiv für Gynäkol., 1882. Bd xix. S. 400.
2	Sept. 11, 1882	" O. Beumer	Greifswald	2†	41	6-para	Normal	Cervical fibro-myoma	8 or 10 hours	High fever	"	7	4	Died	"	40 hours; double pyelo-nephritis	Archiv für Gynäkol., 1882 Bd xx. S. 409.
3	Oct. 6, "	" H. J Garrigues	New York	...	30	1-para	5 3/16 in	Kyphotic pelvis	6 hours	Pulse 124	Not resected	12	12	"	Dead	50 hours; shock and previous loss of blood	Am. Journ. Obstet., 1883, vol. xvi. p. 344.
4	Sept. 3, 1883	" Munster	Königsberg	3†	32	1-para	.....	Fibro-sarcoma of pelvis	3 days	Unfavorable	Resected	10	15	"	"	4 days; diphtheritic endometritis, and septic peritonitis	Centralblatt f. Gynäk. 1886, Nr. 6.
5	Oct. 4, "	" G. Leopold	Dresden	4	23	1-para	2⅜ in	Rachitic pelvis	8 hours	Favorable	"	7	14	Recovered	Living	R.	Archiv für Gynäkol., 1884. Bd xxiv. S. 427.
6	Dec. 26, "	" Charles Jewett	New York	...	46	11-para*	Normal	Cancer of cervix	9 "	Pulse 94 to 108	Not resected	20		Died	"	45 hours; septic peritonitis.	New York Med. Jour. Aug. 29, 1885
7	Mar. 13, 1884	" G. Leopold	Dresden	5	23	2-para	2⅜ in.	Generally contracted pelvis	30 "	Favorable	Resected	20		Recovered	"	R.	Archiv für Gynäkol , 1884. Bd. xxiv. S. 434.
8	July 17, "	" Oberg	Hamburg	6	37	1-para	2⅜ "	Generally contracted pelvis	?	"	"	10	17	"	Twins, 1 liv. & 1 not matured	R.	Ibid.
9	Sept. 29, "	" E. Ehrendorfer	Vienna	...	29	4-para	Normal	Abdominal fibroma	About 2 days	Unfavorable	.....	7	many	Died	Living	6 days; septic peritonitis.	Archiv für Gynäkol., 1884 Bd xxvi. S. 195.
10	Nov. 12, "	" T. M. Drysdale	Philadelphia	...	37	1-para*	"	Fibroid of cervix	2 weeks	Desperate	Not resected	11	11	"	Dead and putrid	26 hours; septicæmia	Operation witnessed by the writer.
11	Nov. 16, "	" M. Sänger	Leipzig	7	21	1-para	2⅜ in.	Rachitic pelvis	Some hours	Favorable	Resected	8	20	Recovered	Living	R.	Archiv für Gynäkol., Bd xxvi. Heft 2.
12	Nov. 28, "	" G. Leopold	Dresden	8†	26	2-para	2⅜ "	Rachitic pelvis	22 hours	Unfavorable	Not resected	.....		Died	"	5 days; septic peritonitis.	Centralb. für Gynäk., 1885. Nr. 8.
13	Dec. 5, "	" G. Leopold	Dresden	9	23	1-para*	.....	Great deformity of pelvis	16 "	Favorable	Not resected	12	10	Recovered	"	R.	Archiv für Gynäkol., 1885. Bd xxvi. H. 2.
14	July 3, 1885	" M. Sänger	Leipzig	10	32	4-para	2¾ in.	Contracted pelvis	34 "	"	Slight resection	7	16	"	"	R.	Archiv für Gynäkol., 1885. Bd. xxvii H. 2.
15	July 16, "	" G. Leopold	Dresden	11	33	6-para*	.....	Retro-uterine myoma	17 "	"	Not resected	.....		"	"	R.	Archiv für Gynäkol., 1885. Bd.xxviii S. 98.
16	Aug. 2, "	" H. Obermann	Leipzig	12	42	1-para	.....	Contracted pelvis	36 "	"	Not resected	8	18	"	"	R.	Archiv für Gynäkol., 1885 Bd xxvii H. 2.
17	Sept. 6, "	" J. R. Weist	Richmond, Indiana	...	43	1-para*	Normal	Fibroid of cervix, filling pelvis.	9 days	Very unfavorable	Not resected.	.....		Died	"	24 hours; probably shock and exhaustion.	New York Med. Rec., Mar. 13, 1886, p. 301.
18	Sept. 20, "	" W. H. Parish	Philadelphia	...	35	Multipara	Normal	Three uterine fibroids	42 hours	"	Resected	11	4	"	Dead and putrid	12 hours; exhaustion and septic poisoning	Communicated by the operator.
19	Sept. 26, "	" Schauta	Innsbruck, A.	...	22	1-para	2½ in	Contracted pelvis	16 "	Favorable	.....	8	29	Recovered	Living	R.	Wien. med. Wochen., 1886. Nr 2-5.
20	Oct. 20, "	" M. Sänger	Leipzig	13	38	4-para	.....	Contracted pelvis	Labor induced Waters broken 3 days	"	Slight resection	8	29	"	"	R.	Archiv für Gynäkol., Bd. xxvii. Heft 2.
21	Dec. 9, "	" M. Sänger	Leipzig	14	35	4-para	.....	Contracted pelvis		"	Slight resection	7	19	"	"	R.	Archiv für Gynäkol., Bd. xxviii. S. 144.
22	Jan. 10, 1886	" G. Leopold	Dresden	15	20	1-para*	2 in.	Contracted pelvis	12 hours	"	Not resected	20		"	"	R.	Archiv für Gynäkol., Bd. xxvii. S. 103.
23	Jan. 25, "	" B. Schultze	Jena	16	32	1-para*	.....	Contracted pelvis	24 "	"	Not resected	8	5	"	"	R.	Archiv für Gynäkol., Bd xxviii. S. 131.
24	Feb. 8, "	" Korn	Dresden	17	30	2-para*	2½ in.	Generally contracted pelvis	14 "	"	Not resected	.....		"	"	R.	Archiv für Gynäkol., Bd. xxvii. S. 108
25	Feb. 13, "	" Donat	Leipzig	18	34	4-para	2¾ "	Contracted pelvis	14 "	"	Resected	22		"	"	R.	Archiv für Gynäkol., Bd. xxviii. S. 147.
26	Mar. 3, "	" G. Leopold	Dresden	19	29	3-para*	2½ "	Generally contracted pelvis	7 "	"	Not resected	.....	.....	"	"	R.	Archiv für Gynäkol., Bd. xxviii. S. 112.
27	Mar. 14, "	" G. Leopold	Dresden	20	28	4-para*	2½ "	Generally contracted pelvis	14 "	"	Not resected	.....		"	"	R.	Archiv für Gynäkol., Bd. xxviii S. 117.
28	April 7, "	" Sippel	Frankfurt	21	32	7-para	.....	Osteomalacic	3 days, waters broken 5 hours	" Good "	.....	12	20	"	" (24)	R. (19)	Archiv für Gynäkol., Bd. xxviii. Heft 1.

Summary: German cases, 21. Women saved, 18 Children living, 20
American " 5. " " " 0. " " " 0
Austrian " 2. " " " 2. " " " 2

In the cases marked by a (*), the peritoneum was not separated from the edge of the uterine wound, but was simply slid over and welted in, when the sutures were inserted and tied.

Manual compression to check excessive hemorrhage when the uterus is incised, is another measure of safety in the improved operation. There can be no longer any doubt about the importance of suturing the uterine wound, and of using so many stitches that the parts will be securely held together without much individual strain upon the sutures.

The value of the Sänger method as simplified since its introduction will be shown by the fact that Germany has saved out of 21 women in six years, as many cases as have been saved under 75 operations in the United States in twenty-five years.

For a full account of the method of performing the Sänger operation, see the *American Journal of the Medical Sciences*, for October, 1885, page 365.

My investigations, which commenced in 1869, soon satisfied me that a great element in the production of fatality in the Cæsarean operation was fear of its consequences, and the consequent postponement of its performance until it was too late to hope for success in a large proportion of cases. In the early days of our country, there were many more *timely* operations and consequently a lower degree of mortality, but of later years the *scare* has become greater under the almost universal teaching of obstetrical writers and lecturers, and we have been reaping the fruits of it as shown by the fact that but 7 women recovered in the last decade, out of a total of 35, or exactly 20 per cent., and that 23 of the children were either dead or in a moribund state at delivery; we have now about reached the mortality of Great Britain, and ought to take active measures to "face about." Let the obstetrical professors in our colleges teach these facts to their classes, and the time will come when the operation deprived of its dangers shall have a much better reputation for safety. If up to twenty-five years ago we saved more than 50 per cent. of the women, we ought to do better than this under the safer methods of Germany. It is a great satisfaction to me to find that the views I have long held and contended for have been at last established by actual results.

In the opinion of Schauta, of Innsbruck, an important element of success in the Sänger operations has been the employment of silver wire as the material for the deep uterine sutures, in almost all of the succcessful cases. This secures the wound against gaping, as the material will not stretch, and is not inclined to cut into the tissues. The credit of first using silver for this purpose is due to the late Dr. Frank E. Polin, of Kentucky, whose successful operation was performed in December, 1852. Several women were subsequently saved by the same material, and one patient twice; but of latter years silk has almost entirely taken its place here, with a much higher rate of mortality as the apparent result. Suturing the uterine wound has become almost universal in the United States, but to very little purpose. There is no use in employing catgut—putting in silk stitches an inch apart—or very little in inserting them at all in the desperate cases in which they have generally been tried. As long as obstetrical lecturers will teach their students to use first the forceps, then try craniotomy, and in the event of failure to deliver by the Cæsarean section, in cases of marked pelvic obstruction, we must not hope for a moderate rate of mortality from the last expedient.

A CASE OF LYMPHADENOMA—HODGKIN'S DISEASE.

BY GUY HINSDALE, M.D.,
OF PHILADELPHIA.

DR. HODGKIN, of Guy's Hospital, first published, in 1832, in a paper entitled "Some Morbid Appearances of the Lymphatic Glands and Spleen,"[1] an accurate description of four cases of the disease which is now generally known by his name. This paper did not, until within the last ten years, attract very general notice. Dr. Wilks, however, in a paper read before the London Pathological Society in 1878, called especial attention to Dr. Hodgkin's paper, exhibited the original specimens preserved in Guy's Hospital Museum, and called the disease by Dr. Hodgkin's name.

In Dr. Wilks's paper there are records of a large number of cases reported by Greenfield, Gowers, Coupland, and others. Dr. James Hutchinson[2] has recorded a remarkable case of this disease, and a full table of the bibliography of the subject. Dr. William Osler has also treated the subject systematically in an article in Pepper's *System of Medicine*.

The case which I wish to record is as follows:

Lou. H., a German, aged thirty-five, was admitted to the Episcopal Hospital, Philadelphia, during the service of Dr. F. P. Henry, on June 14, 1882. He said he was a boilermaker, single, and he denied specific disease. His affection began about six months previously, when he noticed an enlarged gland in the left axilla which occasioned smarting pains. The glands in the right axilla became next invaded, and later those of the arms and neck, all of which at the date of admission were enormously enlarged, producing œdema of the right arm. A fortnight before this he began to have pain in the chest on deep inspiration.

The patient's condition on admission to the ward was bad. Although his tongue was clean, his bowels were constipated. The veins of the abdomen were slightly enlarged below the umbilicus. Splenic dulness was increased in extent, and there was pain on pressure. Liver dulness extended from the sixth right interspace to the border of the ribs, pressure below this line caused pain.

There was great impairment of the percussion note on the whole of the left thorax anteriorly and posteriorly with ægophony and tubular breathing at both apices. At the right base fremitus was absent, and the percussion note was absolutely flat. Respiration tubular and much prolonged. Change of position changed the area of dulness. The heart was normal.

The skin was very dark and was generally covered with a papular rose-colored eruption which itched intensely, causing him to tear his skin in a reckless manner, and leaving him literally covered with discolored scars and excoriations. The urine did not

[1] Trans. Medico-Chirurg. Society, vol. xviii. p. 68.
[2] Trans. Coll. Physicians of Phila., third series, vol. i. 1874.

contain albumen, was acid, light yellow, having a sp. gr. of 1.022.

The blood was examined on the day after his admission by Dr. Henry, with the following result: Number of red corpuscles per c. cm. 4,440,000, about normal. Proportion of white to red, 1 to 254. The treatment adopted was five minims of Fowler's solution of arsenic twice daily and the external use of tincture of iodine upon the glands.

During the six weeks of his life in the hospital the measurement of his neck increased just below the thyroid cartilage from 15½ in. to 16¼ in., and then subsided to 14½ in.; from the occiput over the chin 18¾ in., increasing to 19¼ and falling to 17½. The axillary glands and, to a less extent, those in either groin increased in size and were the seat of occasional stabbing pains. Œdema, however, progressed, first in the arm, next invading the scrotum and prepuce, right foot and further up the limb to the groin, where the glands about Poupart's ligament had become enlarged. Finally, both legs and the whole right side became œdematous; the dyspnœa, which had always been marked, increased and swallowing became almost impossible. The right pleural cavity filled with fluid. The man gasped for breath, screamed with terror, and cried for a knife that he might end his life. On July 28th he died.

At the autopsy the body was seen to be fairly well nourished. Œdema, from the genital region down, was extreme. The skin was excoriated and covered with a papulo-squamous eruption. The glands of the neck were noticeably enlarged. The thorax contained three or four quarts of fluid and shreds of lymph in the pleural cavities, especially in the left. The left lung was carnified and much compressed. The pericardium was filled with fluid.

The heart was normal, weighing 10¾ oz. There were two small glands at the base about the size of large peas. Above the arch of the aorta was a mass of enlarged and indurated glands, filling the mediastinal space and intimately bound to the trachea, œsophagus, and great vessels. One had undergone cheesy softening.

The liver was of normal color, weighing four pounds five ounces. On section nothing unusual observed. The kidneys weighed 6½ and 7¼ ounces respectively and were intensely injected.

The spleen weighed 12½ ounces, was irregular in shape; not unusually friable. Numerous nodules of a color lighter than the spleen substance studded both surfaces, and varied from the size of a pea to that of a hickory nut. On section larger bodies were found, one being as large as a pigeon's egg. The pancreas was of normal size and appearance.

The mesenteric glands were numerous and very much enlarged. They lay in a mass transversely. A large number of glands situated in front of the vertebral column and on both sides of it seemed to exert a certain amount of pressure on the vena cava. The glands of the groin on both sides were enlarged and indurated, and exerted during life great pressure on the adjacent bloodvessels. On section they were tough, of a gray color tinged with yellow. They were not matted together but of quite distinct form, their size varying from that of an egg to that of a pea. Microscopic examination showed a uniform transformation of the cell elements into a homogeneous glistening material not unlike amyloid.

My colleague, Dr. H. A. Kelly, called my attention to a chronic ulcer about the size of a half-dime, situated just within the left nostril at the alar angle. From both nostrils a thin puriform discharge exuded.

As to the nature of this affection, Hodgkin gave his opinion that, structurally, it was a gradual increase of every part of the gland. The latest definition of it is that it is a progressive hyperplasia—an enormous increase in the cellular elements—of the lymph-glands, sometimes also of the spleen with anæmia and the development of secondary lymphatic growths, involving groups of glands in succession in various parts of the body.

It must, however, be distinguished from syphilitic or scrofulous adenitis. In Hodgkin's disease the glands are at first isolated, later becoming agglutinated. The formation of pus is said not to be usually met with, and caseation is extremely rare. Ordinary adenitis pursues a more rapid course at first, and may last for years in a single group, frequently terminating in suppuration without extending to other groups of glands.

Anæmia is common in Hodgkin's disease; the highest blood count which I have seen is in the case which I have recorded, while other cases have shown a reduction of the red globules by one-half or even more. The presence of a nearly normal proportion of the white corpuscles has given this disease also the name of pseudo leucocythæmia.

Retinal hemorrhages are uncommon, while bronzing of the skin, due to the pressure of the glands upon the solar plexus, is not unusual.

But the characteristic feature is the glandular enlargement. Once seen, such a case produces an indelible impression. The neck proper is lost in the huge tumor which extends upon the shoulders disturbing the circulation, perhaps compressing the trachea, possibly even, as in one case, compelling tracheotomy.

The prognosis is bad and the treatment futile. The etiology is involved in great obscurity. Virchow[1] believes that otorrhea usually precedes the cervical enlargement. In view of the ulcer of the mucous membrane of the nose in the case herein reported, it is worth noticing that Mosler inclines to a belief in a local origin of this class of diseases and describes a "stomatite et pharyngite leucemique." Jaccoud,[2] in his description of leucocythæmia, states that often the mouth or pharynx is affected with an ulcerous inflammation having a tendency to hemorrhage. Moreover, he states that the etiology of pseudo-leucocythæmia, Hodgkin's disease, is unknown. Cornil[3] has observed in a case of leucocythæmia an infiltration of the Schneiderian mucous membrane producing a nasal lymphorrhœa. Trousseau gives instances in which chronic irritation of the skin, otorrhea, chronic nasal catarrh, pharyngitis, or irritation of a decayed tooth, gave rise to local glandular swelling which preceded the general development of the disease.

[1] Virchow. Quoted in Trans. Lon. Path. Soc., vol. xx. p. 375.
[2] Jaccoud. Path. Interne, tome ii. p. 842. Paris, 1867.
[3] Cornil. Revue Médicale, Aug. 11, 1883.

HOSPITAL NOTES.

NOTES FROM THE PARIS HOSPITALS.

(Specially reported for THE MEDICAL NEWS.)

REMOVAL OF UTERINE TUMORS PER VAGINAM.

M. PÉAN gave an interesting clinical lecture a few days ago at the Saint Louis Hospital, on ablation of fibrous tumors or myomata of the uterus, *per vaginam*. He began by stating that it is generally believed that fibrous tumors of the uterus ought not to be removed until they cause great disturbance. This belief is founded on another equally erroneous, which supposes that these tumors are frequently met with and rarely cause much suffering, as they develop slowly, especially in women who have passed the menopause. Those surgeons who see a considerable number of cases do not share these illusions, but can testify that fibrous tumors cause much suffering, render life intolerable, and shorten it more frequently than is commonly supposed.

M. Péan says that after a long experience, after having witnessed the suffering and disturbance these tumors cause, he has come to the conclusion that the surgeon who succeeds in removing them, at the onset, before they become developed, without endangering the life of the patient, renders a greater service to humanity than all the others who perfect methods of operation for removing them when they are fully developed. During some years M. Péan has put in practice these opinions; the results have been most satisfactory. M. Péan does not include small submucous pediculated tumors, only sessile interstitial tumors, forming a projecting, convex mass in the uterine cavity. In such cases, even when the neck of the uterus is just sufficiently dilated to enable the operator to pass his finger, it is impossible to ligate the tumor. There is only one resource, ablation; the tumor must be removed bit by bit. The greatest proportion of fibrous uterine tumors pass unnoticed during the first period; it is not until they cause a bulging above the pelvis that they are recognized. There are a certain number of these tumors which, without being large, cause hemorrhage, compression of the bladder and rectum, and endanger life. The diagnosis is easily made, and surgeons generally seek to arrest the progress of the tumor by medical treatment, but they do not succeed. When the symptoms become serious they remove the tumor by gastrotomy.

M. Péan removes interstitial fibrous tumors *per vaginam*. If the neck of the uterus is not naturally sufficiently dilated he dilates it artificially, or, if necessary, incises it; the surface of the tumor is then seized by forceps made expressly for M. Péan by Mathieu; these forceps take hold of it as close as possible to the muscular coat and crush the vessels which proceed from this coat to the tumor and mucous membrane, which covers it; the portion of tumor thus seized is then enucleated, a second pair of forceps is placed above the first and another portion is enucleated, a third and fourth pair are placed in the same way until the entire morbid mass is removed. When necessary one or two pairs of forceps can be kept in place to assure hæmostasis.

This method has been frequently adopted by M. Péan, but is only applicable when the tumor forms a projecting mass in the uterus. When interstitial tumors are not sufficiently developed to be seized by the forceps, they may nevertheless be removed *per vaginam*. The neck of the uterus should be dissected out and laterally incised on both sides so as to be able to penetrate into the cavity of the uterus; the tumor can then be enucleated without danger of hemorrhage by using the forceps. If the tumor, instead of developing in the uterine cavity is more external, near the vesical and rectovaginal septæ, or even in the peritoneal sac, similar to subserous fibroids, another method should be adopted. The neck of the uterus should be dissected out in its circumference, incised on both sides, the tissues that cover the inner surface of the neck of the uterus should also be dissected, and, if necessary, the peritoneal sac opened. While this operation is going on the parts must be kept out of the way by the retractors, and hemorrhage prevented by the use of pressure-forceps. Care is needed to avoid injury of the rectum, ureters, and bladder. When the inferior surface of the tumor is perceived M. Péan makes a deep incision, then seizes the tumor with dentated forceps; the tumor is then removed bit by bit. Sometimes the mass removed is as large as the head of a nine months' fœtus. Hemorrhage is often abundant, and the important vessels must be then compressed by forceps. The peritoneal incision is left open for some time in order to allow the fluids to escape.

MEDICAL PROGRESS.

ANOMALY OF THE PUPILLARY REFLEX IN DEMENTIA PARALYTICA.—Morselli (*Gaz. degli Ospitali*, Feb. 21, 1886) reported a case before the Royal Academy of Turin of an individual who was an insane paralytic, whose pupil dilated when exposed to the light instead of contracting as usual.

Moss thought that this fact might prove a psychical action.

Reymond said that a trifling brief dilatation of the pupil takes place in the ataxic. Also the first effect of eserine is a slight and rapid dilatation of the pupil.

Morselli observed that his case could not be explained by either of these two interpretations.—*Journal of Nervous and Mental Disease*, May, 1886.

TREATMENT OF ASTHMA BY CAUTERIZATION OF THE NASAL MUCOUS MEMBRANE.—At the session of the Berlin Society of Internal Medicine, held May 17, 1886, DR. ZUBLINSKI presented a memoir on the subject above stated. The results obtained in his personal practice may be thus summarized:

He had encountered 143 cases of asthma complicated by diseases of the upper air-passages, in which operative treatment directed to the latter disorders was frequently productive of good results in the chief disease. The cases are classified as follows:

Asthma associated with hyperplastic rhinitis, 55 cases; 8 cured, 3 improved.

21 cases with granular proliferation of the inferior turbinated bone; 6 cured, 4 improved.

11 with similar lesions of the middle turbinate; 5 cured, 2 improved.

9 with disease of the septum and 5 with tonsillar hypertrophy; 2 cured, 1 improved.

28 with various lesions of the pharynx; 3 cured, 1 improved.—*Journ. des Sociétés Scientifiques*, May 26, 1886.

CONSTIPATION IN INFANTS is thus discussed by various contributors to recent numbers of the *British Medical Journal:*

Dr. W. R. Cossham has generally found much benefit from ordering the infant to be fed every morning with a cupful of gruel, which may be sweetened with treacle or honey. Further help is obtained by giving a teaspoonful of cod-liver oil twice a day, and using friction over the bowels every night with olive oil on the palm of the hand. An occasional morning draught may also be necessary, such as tinct. podoph. ♏iij (gr. ij ad ℥j); pulv. ipec. gr. ¼; glycerini ℥j; aquam anisi ad ℥ss.

L. suggests two or three meals of "Mellin's food," daily. He has found this useful, and has long since dispensed with drugs as much as possible in the treatment of some troublesome cases. If the infant is being nursed, two or three meals a day will be sufficient, and these may be dispensed with as soon as the object is attained, and resumed if necessary; but if it be living upon artificial food, "Mellin's food" should be substituted.

Mr. E. Gibson Berkley says that the liquid extract of cascara sagrada, combined with minute doses of tincture of nux vomica, and made palatable with a little syrup of lemon or glycerine, will be found very useful. It should be given two or three times a day.

Sign-Post recommends feeding the infants on well-made oatmeal gruel and milk, in proper quantities, and at intervals. For an infant from four to six months old, he advises half the feeding-bottleful of milk, with the same quantity of oatmeal gruel, to be given every four hours. The directions for preparing the gruel are as follows: Take a teaspoonful of the common coarse, but sweet (not bitter), oatmeal; let this soak in a little more than a tumblerful and a half of cold water for some hours, say all night; then place this meal, and the water, in a clean, covered saucepan capable of holding double the quantity of the liquid poured in; place the saucepan near the fire, so as to heat the contents slowly, and after a time place it on the fire, and stir the contents, until, and for a minute or so after, it boils; then pour the contents on to a horsehair sieve; the creamy gruel is made.

Mr. M. F. Bush advises a spill of paper dipped in castor-oil about two or three inches, and inserted into the lower bowel. It should be used every day for a time.

LARGE DOSES OF DIGITALIS IN PNEUMONIA.—In a Roumanian medical journal, *Spitalul*, February, 1886, DR. I. ANTONIU, of the Military Central Hospital in Bucharest, describes an interesting case of a weak soldier, aged twenty-three, who was admitted to Prof. Z. Petrescu's wards about twenty-four hours after an initial severe rigor, with grave (*forte alarmâtóre*) general and local symptoms of pneumonia. At once an infusion of digitalis (four grammes of the leaves to two hundred grammes of water, the whole to be taken in frequent doses during the day) was given. The same treatment was pursued during the next day (the third of the disease). On the morning of the fourth day the temperature suddenly fell from 39.5° C. to 36.3° C., and the pulse from 92 to 60 a minute. On the fifth, the temperature was oscillating between 36.3° and 37°, a marked amelioration in the local symptoms being observed. On the sixth, the patient's general state was quite satisfactory. On the tenth, he was practically well, but was retained under observation for other eight days. For several days the pulse continued to be as slow as 44 to 48 a minute, it being still 52 twelve days after the last (second) dose of the drug.—*London Medical Record*, May 15, 1886.

PAINLESS EXTRACTION OF TEETH WITH THE AID OF COCAINE.—BIGNON records several cases in which teeth were extracted without pain by the subgingival injection of a twenty per cent. solution of cocaine benzoate. The method as at present practised, seems somewhat complicated, but is probably capable of simplification. A preliminary injection of two or three drops of the solution named is made in the internal portion of the gum of the carious tooth. After waiting forty seconds to one minute, a second injection of the same amount is made at the same point, but somewhat deeper. After a second delay of one minute the tooth is removed. The second injection is not felt. It is interesting to note that no unpleasant results have been observed from this method, although the equivalent of three-quarters of a grain of the alkaloid was used.—*Les Nouveaux Remèdes*, May 1, 1886.

REFLEX NASAL COUGH.—In a paper thus entitled, MR. E. C. BABER presents, in *The Practitioner* for July, 1886, the following conclusions based upon the clinical study of six cases:

1. Reflex nasal cough is only exceptionally produced by probing the anterior part of the inferior and middle turbinated bodies and the tubercle of the septum.

2. In children it is not very uncommon to find that a slight hacking cough can be produced by irritating the anterior end of the inferior turbinated body.

3. The cough reaction may occur without erection of the inferior turbinated bodies, and may be intermittent in character.

4. Reflex nasal cough and the act of sneezing are very closely associated, and probably represent different forms or degrees of the same irritation.

The practical outcome of these considerations is, that in cases of spasmodic cough not otherwise to be accounted for, we should do well to examine carefully the nasal cavities in regard to the reflex irritability of their lining membrane.

SPARTEINE AT HOME.—DR. THOMAS H. BUCKLER writes as follows to the *Boston Medical and Surgical Journal* of June 30, 1886:

"The expensive sparteine lately recommended by Germain Sée for cardiac weakness, is prepared from Scotch broom—spartium scoparium—the *Planta Genista* or emblem of the Plantaganets, which grows in many parts of the thirteen original States, on sterile soil. It was brought over here by the Scotch and English to prevent the washing of gravelly roads and gutters. It should be cut and gathered at this season, and dried like hay. Its active principle is extremely soluble in water, and two ounces of ground or contused stems to a quart of boiling water, a wineglassful for a dose, every eight hours, are equivalent to a grain and a half of the prepared gum used by Dr. Sée. This remedy is useful not only in failure of the cardiac ganglia, but as a tonic to the organic and vasomotor nerves in whatever part

of the body congestions occur from loss of power in them. I have used this agent in the form of infusion for half a century, and with marked advantages in many cases."

SUDDEN DEATH FROM CORPULENCY.— PROFESSOR KISCH, of Prague and Marienbad, has recently collected statistics, and written a contribution in the *Berliner klinische Wochenschrift*, on the frequency of sudden death amongst extremely stout persons. In nineteen cases of this occurrence, acute congestion of the lungs was discovered in twelve cases, cerebral hemorrhage in six, and rupture of the heart in one. The pulmonary congestion arises, as Dr. Welch has already shown, from paralysis of the muscular walls of the left ventricle, while the right side of the heart continues to act with almost normal vigor. The apoplectic symptoms were traced, in most of the cases, to arterial sclerosis, a very frequent concomitant of extreme corpulency. Rupture of the heart is due to the overworking of the walls of the left ventricle, which, being involved in fatty infiltration and degeneration, can no longer increase in size, in proportion to the extra work which it has to perform. The failure of heart-power appears always to be the immediate cause of death, which generally follows immediately after violent exertion, or an excess in drink or diet. Stout subjects over fifty years of age are very liable to fatal syncope, which, however, is frequent amongst the corpulent at earlier periods of their lives.—*British Medical Journal*, May 15, 1886.

ANEURISM OF THE SUBCLAVIAN ARTERY CURED BY GALVANOPUNCTURE.—DR. SABOIA has presented to the Imperial Academy of Medicine of Brazil, the history of a case of aneurism of the right subclavian artery in a man aged thirty, cured by galvanopuncture. The tumor was of the size of a small hen's egg, bounded on the inner side by the sterno-mastoid, below by the clavicle, and on the outside by the trapezius. There were no difference between the pulsations of the two carotids, but the radial pulse of the left side was strong, full, and vibrating, while on the right side it was small, filiform, and scarcely perceptible. Two metallic needles were introduced into the tumor, and connected with the positive pole of a Gaiffe's pile of fourteen elements, the negative pole being applied to the trunk at a distance from the aneurism. The sitting lasted thirty-five minutes, at the end of which the tumor had become tense and had ceased to pulsate.—*London Medical Record*, May 15, 1886.

INOCULATION FOR ANTHRAX IN INDIA.—Recent experiments on the inoculation of stock for anthrax, in Madras, have attracted the attention of the Punjab Government, which is considering a circular on the subject. The Inspector of Cattle Diseases for Madras submits a lengthy report, which deals more with Dr. Klein's observations on Pasteur's anthrax vaccine than the work in hand. This much, however, can be gathered from Mr. Mills's statement. One hundred and nine government animals, and nineteen head of cattle belonging to ryots have been inoculated with vaccine from Paris during the past two years; and the result of these inoculations has been perfectly satisfactory. During the preliminary experiments to test the strength of the vaccine after its voyage out, everything went well as long as the doses laid down by Pasteur were adhered to. An unlucky guinea-pig, however—guinea-pigs and rabbits supply the rank and file of the noble army of martyrs to science—was over-inoculated, and died with all symptoms of well-developed anthrax; proving by its death that even the attenuated vaccine used in the first inoculations is not to be trifled with. Mr. Mills holds that, in view of the frequency and destructiveness of anthrax outbreaks in India, and the hopelessness of dealing with the disease when it has established itself anywhere, protective inoculation of stock should, if at all possible, be insisted upon. That is to say, a staff of veterinary assistants should do for cattle what the vaccinator in the district does for man. Setting aside the difficulty—no light one, as the report will show—of keeping up a constant supply of trustworthy vaccine in India, we are brought face to face with the reluctance of the ryots to accept any new thing; and the blind suspicion with which they would naturally regard any man syringing an unknown horror under the skins of their kine. Mr. Mills has had the results of Pasteur's labors translated and distributed to cattle owners; but the result is not inspiriting so far.—*The Indian Medical Gazette*, May, 1886.

EFFECT OF MENTAL OVERWORK UPON THE TEETH.—Among the hard-worked pupils of the Paris public schools, the teeth become deteriorated in a few weeks after entry. The second dentition is often premature. These observations confirm the statements of Dr. J. L. Williams, who has given great attention to this subject. He has shown that any mental strain shows itself upon the teeth in a short time, both in increased decay, as well as in increased sensibility of the dentine. Dr. D. M. Parker has reported that these same changes are always apparent in men who are training for athletic trials. As there is not the slightest doubt of the accuracy of these observations, they show that these are matters which demand serious consideration from educators.—*Boston Medical and Surgical Journal*, June 3, 1886.

TOXIC EFFECTS OF CORROSIVE SUBLIMATE USED AS AN ANTISEPTIC.—This substance has come into very general use during the last few years, in the form of a solution, as an antiseptic. There can be no doubt that it possesses very considerable antiseptic powers; but, unfortunately, it is also a violent poison, and abundance of cases are now on record which show that its use is often attended with very great risk of toxic effects resulting from its absorption. In a paper recently contributed by Dr. Lucien Butte to the *Nouvelles Archives d'Obstétrique et de Gynécologie*, a long series of such cases are adduced, in many of which a fatal result followed persistent vaginal injections of the solution of Van Swieten (1 in 1000). The symptoms of poisoning were the more difficult to detect from the fact that, occurring during the puerperal period, they were masked, to some extent, by those incidental to this state. They consist principally of hypogastric pain and tenderness, violent abdominal pain of a colicky character, accompanied by frequent mucous stools, often stained with blood. The urine is generally diminished in quantity, and contains epithelial cells, casts, and more or less albumen. Salivation is most frequently

absent, but the mouth and throat are red and dry, and there is marked thirst. Dr. Butte is inclined to consider that absorption occurs most frequently in cases where lacerations of the perineum, or of the cervix uteri, have taken place, or where large ulcerating surfaces are present. The toxic effects are naturally more marked in debilitated and cachectic patients. The post-mortem appearances are indicative of enteritis, with sloughing of the mucous membrane of the large intestine, while the kidneys are enlarged and anæmic. Deposits of crystals of oxalate of lime are common in the uriniferous tubules, due, it is suggested, to the decalcification of the bones, which is said to result from the presence of the bichloride in the system. As Dr. Butte quotes no fewer than twenty cases, in which the fatal result was attributed to absorption of the mercury, it is evident that, in obstetric practice at any rate, the use of even extremely dilute solutions requires very great caution.—*British Medical Journal*, June 19, 1886.

CIRCULAR CAUTERIZATION IN OPACITY OF THE CORNEA.—M. LOUIS VACHER, of Orleans, finds that in cases of corneal sclerosis or episcleritis better results can be obtained by circular cauterization lightly performed with a loop of wire heated by the galvanic current, than by the more usual method of passing a knife round the edge of the cornea. In one case, after eighteen months of this treatment, a patient who had been unable to see from corneal opacity for fourteen years, recovered the power of vision. In another, a cornea which had been absolutely covered with leucoma for ten years, had in two years become sufficiently transparent for the performance of iridectomy. M. Prouff confirmed M. Vacher's statement, stating that he himself had three times operated in this manner with the most complete success.—*Lancet*, July 3, 1886.

SUCCESSFUL GASTROSTOMY.—A case of gastrostomy under the care of WILLIAM SQUARE, F.R.C.S., is thus recorded in *The British Medical Journal* of July 3, 1886. J. W., aged sixty-two, a monthly nurse, was admitted on April 10, 1885. For some months she had had progressive difficulty in swallowing. About a week before admission she came to an absolute stop. Her history was good. Some blood in the vomit, and increasing tenderness, prevented the passage of any tube. Without operative interference, it was evident that she must die very soon.

On May 1, 1885, the first part of the operation of gastrostomy was performed after the usual custom. The stomach was easily found, and silver sutures were used. Nutrient enemata consisting of beef-tea and brandy, with some tincture of opium, were given every four hours.

On May 3d the stomach was opened with a Gräfe's cataract-knife. A soft India-rubber tube was introduced, being retained in place by a suture passed through it; one ounce of peptonized milk was given every two hours by the tube; in addition, one enema was given every five hours.

On May 9th peptonized strong beef-tea (two ounces) was given every three hours by the tube. The temperature was always normal, and there were no symptoms after operation but slight retching for two days. She was discharged on May 23, 1885.

On April 6, 1886, she looked almost as well as ever. She had travelled to Brighton and back, and, by the courtesy of the guard, fed herself *en route* in a separate compartment. She always laid down to feed. There had been an interval of one month during which she could swallow as well as ever, even hard meat and crusts. During all this month, however, she vomited mucus and blood until the capability of swallowing ceased.

She was in the habit of making her day's food each morning—a large basinful of beef-tea, bread, and milk. She injected as much as she wanted when hungry. Her meal-times corresponded with those of the family. Her mouth watered before. The only thing that she could taste when injected was whiskey. It had the usual alcoholic effects. She appeared very well, and it seemed that the diagnosis of carcinoma might be wrong.

On April 14, 1886, she was taken suddenly ill with vomiting, and a condition of semi-collapse. A large amount of green, highly offensive, pus was discharged by the side of the tube. She slightly recovered, but, up to the time of her death, took in but little, and was constantly sick. The green pus was always exuding, more or less, by the side of the tube. She became gradually worse, and sank on April 25, 1886.

At the necropsy the whole of the lower part of the œsophagus was one enormous ulcer; but there was no thickening or suspicion of cancer. The whole mucous membrane was simply destroyed. It was very offensive. The mucous membrane of the stomach was not healthy, but had nothing very remarkable about it. The orifice of the hole was very peculiar. I had expected to see it valvular, or dilated into a funnel; but it was no larger inside than out, being perfectly circular, and about the size of a No. 16 catheter. There was a little left pleurisy, but nothing else to record. I think we may say that the poor woman had one year of happy life, without ache or pain; and hence I am justified in calling this a case of "successful gastrostomy."

THE USES OF ESERINE SULPHATE IN DISEASES OF THE EYE.—In a paper read before the Philadelphia County Medical Society, on June 16, 1886, DR. H. F. HANSELL presented the following conclusions:

From the reports of others, and from my own experience, I feel justified in concluding that eserine is indicated: 1. In acute affections of the cornea, involving the deeper layers. 2. In threatened perforation. 3. In diseases of the cornea where atropia fails to cure, and where the danger from posterior synechia and subsequent iridectomy is less than the present danger to the cornea. 4. In prolapse of the iris and beginning staphyloma. 5. In some cases of dislocated lens. 6. In paralysis of the ciliary and iris branches of the third nerve. 7. In glaucoma.

De Wecker sums up his opinion of eserine in these words: "In the use of eserine a step in advance has been made in ocular therapeutics. I do not exaggerate when I say that, thanks to our being able to substitute it for atropia, we are able to save eyes which formerly would have recovered, if at all, with more or less considerable staphyloma—a condition which would have left scarcely any hope of a restoration of vision. Furthermore, the powerful aid rendered by eserine should encourage any careful practitioner not to resort too readily to surgical interference in abscess of the cornea."—*College and Clinical Record*, July, 1886.

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PHYSICAL TRAINING IN AMERICAN COLLEGES.

IT is a startling fact announced by Dr. Sargent, of Harvard College—than whom no one has better means of knowing the truth—that "half the young men who come to college are physically in arrears." If that be so when they first go to college, and no provision be made for them to gain in bodily vigor while in college, what must be the result? What is the result? We see it all around us. Scholarly men in broken bodies, a large part of their mental capacity undeveloped for want of a better physical basis; snarling dyspeptics ever complaining of their stomachs, like Carlyle with his castor-oil,—"that oil of sorrow;" early graves quenching many a large and brilliant future that "might have been."

But a new era has dawned within the last twenty-five years. Mr. Higginson, writing of gymnastics in 1861, well said that the educational systems then in vogue always contemplated man as a sedentary animal, and that it was something to have outgrown the period when active sports were prohibited. In his early days there was but one boat in Cambridge, and the faculty suppressed that under a college law prohibiting a student from keeping any "domestic animal." In these twenty-five years there have been built thirty-three distinct gymnasiums in educational institutions, the total cost of which has been over $600,000. Amherst College led the way, not only in first providing a really good gymnasium in 1860, but in grasping the real idea of what such a department meant; and Harvard, following in 1879 with her magnificent Hemenway gymnasium, has still further developed the idea. In fact, these fine gymnasiums only gave the chance for Dr. Hitchcock and Dr. Sargent, two men of force and large ideas, to impress themselves on the community.

Most people—even educated men, and doctors among them—unless familiar with the "Sargent System," have an idea that a gymnasium is a place which anyone may go to perform feats of muscular strength, and so to become an acrobat or an athlete, and if he cannot do this there is no use of his going there. That is the fundamental idea of "College Athletics," as seen in stated contests by athletic associations, in rowing, baseball, and football matches.

But "Physical Training" in American colleges, in the proper sense—in the sense of Hitchcock and Sargent—is a very different thing. In college athletics only the athlete can excel, and in many games the strength and science are such that only the few who are strong and skilled can take any part whatever. But the "physical training" of to-day contemplates the whole body of the students, that every one shall get his share of good out of it. The weakly are more cared for than the strong. Every man is measured and gauged in all parts of his body, and those who are deficient are "prescribed for" intelligently, as an oculist does for myopia or a physician for a pneumonia. It is directed not only to muscular development, but to the state of the skin, the digestive organs, the heart, the lungs. It looks less after how many pounds one can lift than after his diet and drink, his hygienic surroundings, hours of study, general bodily vigor, habits and tastes, and adds to these the needed exercises. "Developing apparatus" plays a large part in the scheme. The weak parts are sought out and built up by them so that a symmetrical whole shall result in which no overdevelopment of one part shall take place, the body shall not be weak while the brain is strong, the legs shall not be unduly strong, and the arms or back weak. And all of this is contemplated as a part of the college curriculum, in which the Professor of Physical Culture shall be a physician and a member of the faculty, and the physical development is as much a college duty as mathematics or Latin, or any other study—truly a new idea in a college course!

Of course, many men will go further and develop more or less into athletes, but the object of college gymnasiums and college physical training, it cannot be too strongly stated, is not this, but it is to develop the physical health—and, as a consequence, the mental vigor—of the whole body of the student, and especially of the weaker ones who need it most.

We have been led to these remarks by reading Circular No. 5, of 1885, of the Bureau of Education on "Physical Training in American Colleges," by DR. E. M. HARTWELL, of Johns Hopkins University. This elaborate paper is alike creditable to the author, the University in which he is the able Instructor in Physical Culture, and to the wise management of the

Bureau of Education. In it will be found views and ground-plans of most of the good college gymnasiums, with lists of their apparatus, where this can be had, the architects of the buildings, the various physical examinations to be made, and, in a word, all the information one could desire on the subject. Dr. Hartwell has dealt with the subject with his usual thoroughness, and has made all colleges his debtor for the information, and especially for the intelligent way in which he describes and enforces the new education in its care of our bodies. Amherst and Hitchcock founded the new system, Harvard and Sargent have developed it, and the Bureau of Education and Hartwell will popularize it.

MASTOID OSTEITIS.

THE occurrence of suppuration within the mastoid cells is usually associated with disease of the middle ear, and in a certain number of cases it is limited to the sinuses. In others it begins in them, and afterward attacks the substance of the bone itself, producing a secondary osteitis. In a third class of cases it is primarily a bone disease, and, perhaps, this occurs oftener than is generally supposed. In such cases there may be present any of the ordinary forms of inflammation of bone, or of its periosteum, or of both. And the fact that the inflammation may occupy a variety of situations is of the utmost consequence. It may be in that part of the bone which is most accessible, and which is usually approached with the expectation of finding pus when the symptoms point to its formation, or the inflammation may be confined to the parts of the bone which form the inner aspect of the mastoid process, and which are difficult of access. This fact may account for the fruitless incisions which have at times been made by excellent surgeons, and for an unfortunate prolongation of the sufferings of a patient, or even a fatal issue of a case which might have terminated happily if the process of mastoid osteitis had been better understood.

The nature and treatment of "some of the less common forms of mastoid disease" have been studied recently by J. ORNE GREEN, who, in a paper bearing this title, in the *Boston Medical and Surgical Journal*, April 15, 1886, reports the histories of two cases in which it was necessary to extend the customary incision over the mastoid process behind the ear, to a point below its tip, and to penetrate below the sterno-mastoid muscle in order to give exit to pus. In addition to the interest which attaches to the method adopted in these cases, they have a special interest as bearing upon the points to which we have called attention above. It is usual to speak of suppurative inflammation of the mastoid bone as an extension of a process of suppuration in the middle ear. But, as we have already said, it may undoubtedly be a primary affection of the bone itself. Analogy, the symptoms of many cases, and the history, which often discloses no recent attack of osteitis, and not unfrequently indicates the occurrence of an acute infective disease, all point to the plausibility of referring these inflammations to the bone itself, or to its periosteum. In one of Green's cases the patient had an abscess of one of the ribs when he came into the hospital, and subsequently developed an inflammation of the tympanum and mastoid process. Here we have a history which corresponds to that of many cases of infective osteomyelitis, and we think it worth while to call attention to this view of such cases, because it has an important practical bearing upon the treatment of certain forms of inflammation of the mastoid process which are probably not very rare.

A PLEA FOR A CHEST HOSPITAL.

ANY one who has watched the condition of the victims of pulmonary consumption among the poor, must feel that their lot is in many respects more pitiable than that of any other class of patients—the insane not excepted. Hopeless as their case very often is, it becomes doubly so on account of the meagre medical benefits which can be rendered them. General hospitals seldom receive them, and to the poorhouse they generally refuse to go, and if they find no charitable friends they end their lives in a miserable hovel, or perhaps in the garret of a tenement house.

General hospitals have as much justification in refusing to admit them as the unfortunates have in declining to enter the poorhouse, for neither is adapted to their proper care and treatment. Lung affections are a special class of diseases, and they require as much special treatment as diseases of the eye or of the skin, or diseases of any other class. To the people of this country the idea of special hospitals for chest diseases is a comparatively new one. But it is not so in Europe, where many of the most important cities contain large institutions exclusively devoted to their treatment.

No other class of diseases has received more scientific attention from physicians, particularly during the last decade, than those of the respiratory organs, and it must be sadly confessed that the gain has been entirely incommensurate with the amount of work expended. Cod-liver oil, the hypophosphites, malt extracts, koumiss, forced feeding, compressed and rarefied air, inhalation of oxygen, and of nitrogen, antisepsis, cold and hot baths, cold douches, external applications, and a host of other remedies and expedients have been launched before the patient, yet the disease continues in its fitful and triumphal course. The recent discovery of the bacillus tuberculosis inspired the hope that this microörganism maintained a causative relation to the disease, and that

the true and rational treatment of consumption consisted in efforts to extirpate this parasite. This plan has, also, been tested from every conceivable approach, and thus far has yielded no decided beneficial results.

There can be no question that very many of the methods which have been advocated and recommended are capable of yielding excellent results, but the most salient reason for their failure to accomplish what they should lies in the fact that we have no buildings suitable to combine these methods for the greatest possible good to the patient—a building in which he is under the constant and entire control of either nurse or assistant, and in which he is enabled to pursue a systematic course in regard to everything pertaining to his welfare. Such a building should be erected in a healthful locality, possess the best heating and ventilating apparatus, good drainage, a pure water supply, ample conveniences for outside and indoor exercise, glass pavilions for exposure to sunlight during winter, hot and cold baths, douches, appliances for the inhalation of compressed and rarefied air, etc. In such an institution the patient would be under immediate observation, and could be directed what to do in relation to eating, drinking, sleeping, exercising, amusements, and the application and administration of remedies for the whole twenty-four hours of every day.

Serious objections are very often presented against a collection of many consumptives in one building or locality, inasmuch as it is urged that it increases the danger of infection and contagion. There is good ground for believing, however, that the risk from this source is more imaginary than real, a view which is strongly supported by the statistics of the Brompton Hospital for Consumption in London, and similar hospitals elsewhere. That phthisis is infectious or communicable from man to man, few will deny, but that it is so contagious that those affected with it require constant isolation is a statement not warranted by facts, and is too bold and too cruel an assumption to merit serious consideration. It is urged, moreover, that those who are in a more or less hopeless state exercise a depressing and discouraging influence on others who are in the incipiency of the disease. The testimony, however, of those who have spent many years in institutions of this kind shows that this timidity disappears in a very few days after admission, and that this influence is felt most by those who are the most desperately ill. A commingling of these patients, on the contrary, it is found creates a sympathy for each other's sufferings, and force of example, which their association engenders, is most useful in stimulating them to do things in the way of treatment which they could not otherwise be induced to undertake.

Unchecked and undaunted as consumption presents itself to-day, it is evident that home treatment, as compared with hospital treatment, is a failure, and that more decided measures must be instituted to cope successfully with this disease. Recent statistics show that the highest percentage of favorable results in chest diseases is derived from special hospital treatment, singly and alone. We trust that some of our wealthy philanthropists may have their benefactions directed to a channel in which their liberality may be applied in the relief of the suffering of this hitherto neglected but most deserving class of patients.

THE USE OF MEDICINES TO CAUSE ABORTION.

AT a recent meeting of the Gynecological Society at Hamburg, the proceedings of which are recorded in the *Centralblatt für Gynäkologie*, May 22d, LOMER reported the case of a woman who, when four months pregnant, took stramonium for the purpose of causing abortion; grave symptoms of poisoning followed, but she recovered, and the pregnancy was unaffected. She was advised by another woman to take the medicine for the purpose indicated, so that there seems to be a popular belief that stramonium is an abortifacient. Lomer, however, could find in none of the reported cases of stramonium poisoning an instance in which this agent caused miscarriage. He next turned his investigations to the question as to whether belladonna, belonging to the same family and having analogous effects, is an abortifacient; but he also failed to find any published case of belladonna poisoning in which miscarriage occurred. He was led to make this inquiry as to belladonna from the fact that Ploss states that the Greeks use this agent for the purpose of causing miscarriage. It is true that Ploss in that wonderful collection of information pertaining to woman in all ages and among all peoples, *Das Weib*, does state that the Greeks use belladonna for the purpose mentioned, but he does not state that it is administered internally; it, in combination with opium, is introduced into the vagina, and then other means are used in addition.

Lomer's conclusion was that no medicines are certain to act upon the impregnated uterus, with the result of terminating the pregnancy. In the discussion which followed, RATJEN thought that aloes had some effect, which was denied by Lomer. HACKERMANN had seen abortion follow the use of cognac; and, on the other hand, PIZA saw a pregnant woman who drank three-fourths of a litre of "Rosmarinschnaps," and she did not miscarry. PROCHOWNICK had seen active laxatives result in miscarriage, and HAPPE had seen an instance in which a pine-tree cone inserted in the vagina failed to cause miscarriage. RÆTHER stated that in the rural districts of West Prussia, savine, oil of amber and arsenic were

used as abortifacients; but such specific action was only observed when they produced a severe gastro-enteritis.

For our own part, we have met with two instances in which pregnant women took a preparation of May-apple in such large doses, for the purpose of causing miscarriage, that they were brought to a condition of great prostration by violent purging and vomiting, and in neither instance was the pregnancy interrupted. The general conclusion of the profession as to the action of reputed abortifacients is that such medicines do not exist. An emetic, or a drastic purgative may, in a given case, be followed by abortion, but the same means might be used in fifty other cases of pregnancy without such a result following.

SOCIETY PROCEEDINGS.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting June 21, 1886.

THE PRESIDENT, C. A. LEALE, M.D., IN THE CHAIR.

DR. EDWARD G. JANEWAY read a paper on

THE DIAGNOSIS OF CERTAIN OF THE INFECTIOUS DISEASES.

For a number of years, while occupying the position of Health Commissioner, he said he was so placed that it was necessary to give a great deal of attention to this matter. He was also thus enabled to see those circumstances which are most liable to lead to mistakes, and at times to witness the sad effect of some of them.

The diagnosis of smallpox when it presents itself with all its ordinary characteristics is a matter of no special difficulty to one who has previously seen a few cases. But owing to the system of persuasive vaccination carried on in New York, and presumably to somewhat the same extent in other cities of the country, for the past nine or ten years, there had been comparatively little of the disease. Systematic vaccination in general, vaccination in the neighborhood where a case of smallpox had occurred, isolation or removal of the patient, disinfection of premises, and subsequent careful outlook for other cases in the neighborhood, had been successful to an extent appreciated by few. But Dr. Janeway thinks that the outlook for the future is not so assuring, as the work of vaccination has been crippled to a considerable extent during the past year, and a large contingent of infected persons exists, who may become victims to and spreaders of smallpox.

He has known the start of a considerable outbreak of the disease to be traced to a single erroneous opinion. Another very unfortuntate circumstance had happened which would tend to delay the prompt action desirable in dealing with the disease. The law had been invoked to inflict a penalty upon a physician who had reported a case of suspected smallpox to the Board of Health, and though an appeal had been taken which would probably be successful, yet the effect was unfortunate. It seemed to him that the case of the physician dealing with disease, and particularly with one which is dangerous to the public health, ought to be protected by law.

One of the greatest safeguards against an error of diagnosis as regards smallpox, consists in having such a classification of the disease fixed in the mind as should serve to take account of the various methods of its manifestation. In a number of the text-books important facts bearing upon the method of development of certain forms of smallpox are omitted. A satisfactory classification he had found as follows:

Purpura variolosa.	
Variola verâ . . .	Confluent. Semiconfluent. Discrete. Corymbosa. Hemorrhagic.
Varioloid	Variola varicelloides.

The distinction between purpura variolosa and the ordinary hemorrhagic type, where the blood is extravasated into the vesicles, should be kept in mind, and it can be best accomplished by making such a classification as the one referred to. In his experience, the failure to recognize, or even to have any knowledge of the existence of this form of the disease, has led to very serious consequences. The danger consists in mistakes between this form of the disease and the malignant type of some of the other infectious diseases, particularly measles, and, much more rarely, typhus fever, ulcerative endocarditis, and purpura hemorrhagica.

A careful cross-examination of the patient and his friends should be made, and, at the same time, the possibility taken into consideration that a visit to a strange place, the getting of new clothing, etc., might, in the absence of any other clew, furnish one. In these days of rapid travel, with emigration to the West, in that section of the country, as well as here, the recent arrival of strangers in the neighborhood must be thought of. Should it be learned that a possible exposure had happened, and to a case of disease of unknown nature, it should be a part of our duty to ascertain by inspection of such sick person, or by inquiry of the physician in attendance, the nature of the illness.

By way of illustration, Dr. Janeway related the following case: Some years ago he was called in consultation to another city to decide as to the nature of a strange variety of fever. One patient had died of it, and another was seriously ill at the time. When seen, the latter was sitting in bed, with very feeble pulse, though with only slight febrile movement, and showing evidences of dyspnœa, due to changes in the blood. He had a wet cloth on the forehead which concealed a number of purpuric spots in the skin of that part; while on the chest, abdomen, and legs these purpuric spots also existed. In one place there was a small vesicle (which was, however, of no determinate character), and at no point were there any papules or umbilicated vesicles. His mind was perfectly clear, and this was the sixth day of his illness. The hemorrhages had only appeared in the skin of the forehead on the morning of that day; but the eruption on the rest of the body had already existed for more than a day. Dr. Janeway suggested that the disease was in all probability purpura variolosa; in which opinion he received

confirmation, *first*, by hearing that this patient had attended the one who died, and had held her in his arms, the fatal issue having taken place about twelve days before the beginning of his own sickness; and, *second*, by asking about the others who had been exposed during the sickness and at the funeral of the first patient. He learned that a number of these individuals were down with fever and that one had an eruption. The latter proved to be discrete smallpox. The two cases with hemorrhagic extravasation were, then, undoubtedly variola, but of a form which none of the attending physicians had previously encountered. Quite an outbreak of variola occurred in that city.

This case illustrated better than any words these three points to be considered in establishing a diagnosis:

1. It is important to know the nature of the disease from which a malignant case, not itself possessing positive features, has developed.

2. Should the patient have died, this may be done by an investigation of others exposed to the originating case; these having perhaps a milder and more characteristic type of the malady.

3. The result of the exposure to the malignant case may in some instances be a proof of the nature of the disease.

In other words, we must take into consideration what gave rise to the disease in question, and what has been produced by it. Even in a large city, and in the case of homeless tramps, a rigid inquiry and cross-examination would do much toward throwing light on these cases. What he wished to emphasize was, that we must not be content to consider simply the eruption and patient's condition; but must use every means in our power to establish a correct opinion as to the nature of the disease producing this state, which is denominated purpuric or malignant. It is a great mistake to suppose that hemorrhages from mucous surfaces, a previous diffused scarlatinal-like rash, or maculo-papules becoming flattened purpuric spots, are necessary accompaniments of this type of hemorrhagic variola. Variations from this form which he had described were met with, up to that in which characteristic spots of smallpox eruption occurred.

Dr. Janeway here introduced another case to illustrate the necessity at times of making an autopsy to decide the nature of the doubtful disease. It was one in which an atypical case of smallpox was mistaken by the attending physician for cererbo-spinal meningitis; and two weeks after the death of the patient a gentleman who had been with her during her illness and had refused vaccination subsequently because he felt confident that the disease was not variola, sickened with, and died of, confluent smallpox.

The mistake in differentiating between scarlatina and smallpox occurs in those cases of variola in which a marked red efflorescence first occurs, and in which shortly darker spots and papules, followed by vesicles, appear. In some cases petechiæ occur in places and hemorrhages follow; and not seldom, in severe cases, he has seen the vesicles first on the inner sides of the thighs, and in the axillary space, the face being free. As the throat may be sore at this time, a mistake may occur and the order of events not kept in mind, which is two or three days' sickness, and then the rash and sore throat and mouth, due to the eruption. A mistake which he had known to occur was to consider the vesicles in such a case as sudamina. One point is to be borne in mind, viz.: that an examination which leaves out an inspection of the abdomen and chest, and particularly of the inguinal and axillary regions, will be very apt to lead to a mistaken opinion in the case of a severe infectious disease.

Again, the mistaken diagnosis of measles occurs in a twofold manner. On the one hand, the first stages of smallpox eruption prior to the formation of the vesicle, lead one who looks hurriedly at a case, and does not conconsider the previous invasion symptoms, to speak of measles. The other mistake occurs to one who looks at a severe case having the skin red, and in it a number of dark maculo-papules, together with hemorrhages of larger extent, and having hemorrhages from other places, as the nose, etc. One who has seen the first stages may have considered it as already shown to be scarlet fever, whereas, a little later, the numerous papules will lead to the mistake of black measles.

The mistake between syphilitic eruptions and smallpox is generally to consider syphilis as variola rather than the reverse. Most of the mistakes are dependent upon want of close observation of the whole eruption and of a consideration of the history of the case. The multiformity of the rash, the condition of the glands, and the duration of the disease will determine, in a large number of cases, the correct diagnosis, to which the history will add confirmatory evidence. Two illustrative cases were given by Dr. Janeway. One additional point had been observed, viz., absence of the eruption on the hands and feet and in the mouth in cases of a syphilitic pustular eruption otherwise pretty generally distributed over the body. In his experience syphilis causes more mistakes in diagnosis than any other disease or eruption, excepting only measles.

Mistakes between variola and varicella are not infrequently made. The distinction of typical cases is sufficiently easy, though he thought students are not infrequently puzzled by finding opposing statements regarding the appearance of the varicellous eruption, not only in different text-books, but also, at times, in different parts of the same work. The danger in mistaking varicella for varioloid is in paying too close attention to the eruption, for sometimes a slight induration is met with at the base of some of the spots of varicella, due to irritation. A careful scrutiny will generally show on the back and buttocks, and behind the ears, characteristic spots, whilst in other places the eruptions may be more or less altered. In cases of doubt between variola and varicella, attention should be paid to the cause of the attacks if known, and to the time of the development of the eruption after the commencement of sickness. Dr. Janeway has known of several cases of variola being contracted from cases of supposed varicella, cases which had been pronounced varicella by careful and trained examiners.

He had met several cases of varicellous-like eruption, so that, with Gregory, he believed in making a subdivision of varioloid which should include this under the head of variola varicelloides. He was led to this opinion by observing several cases of vesicular eruption closely resembling varicella in persons protected by vaccination, who were in houses where a patient was under

treatment for variola. Another chance for error exists in the fact of the patient coming under observation at that time in the history of a mild variola when the vesicle is full.

At times different forms of skin disease are mistaken for variola; those which are most liable to lead to such a result being herpes, erythema, urticaria, and lichen.

Typhus fever, when well marked, and presenting the characteristic eruption, occasions little trouble in making a diagnosis. The earliest cases of a visitation are, however, not always so well developed, and, in consequence, the disease gains headway, usually in localities most calculated to promote a rapid spread of the disease. In children particularly, there may be great trouble in deciding between typhoid and typhus. Some years ago while typhus was prevailing, an outbreak of fever occurred in an orphan asylum where, out of a number sick, there was absolutely no characteristic eruption. The attendants said that only a few had looseness of the bowels, nose-bleed had not been marked, and the records of fever had been loosely kept; so that it necessitated several days of study before an opinion could be given, with some degree of certainty, that the disease was typhoid fever. This was confirmed by seven autopsies.

If we are able to study a number of cases, we may find the average duration a marked help in diagnosis, especially in adults. A fever, the greater number of cases of which terminate, many of them with comparative suddenness, between the eleventh and fourteenth days, should always raise the suspicion of typhus. An autopsy should invariably be made as a sanitary necessity (should the opportunity occur) to decide the nature of a doubtful outbreak of fever. The lesions of typhoid are characteristic, while those of typhus are in some respects negative; but, in practice, if one of a number of cases of fever which has lasted longer than a week should present on autopsy only an enlarged spleen, with minute hemorrhages on the serous membranes, and parenchymatous degeneration of the liver and kidneys, we would feel justified in considering it due to typhus fever in this climate. Where isolated cases are concerned, an examination of the intestinal mucous membrane and of the muscles should be made, lest the trichinous disease may have passed in one instance as a fever.

Dr. Janeway said he had been much struck by the value of an examination as to the nature of the disease occurring in other inmates of the house or among the friends of a fever patient, as an early help in deciding upon the true cause of a case of fever. This is particularly true of hospital patients, who are often, as a result of the disease, assisted perhaps by congenital deficiency, too stupid to give a good account of themselves. The neglect of resorting to this means of information and diagnosis had been, in several cases in his experience, very unfortunate. As in the case of smallpox, he said he would urge upon the profession the wisdom of oftener resorting to this plan in forming an opinion. The Board of Health would do it on request. He was willing to admit that typhoid fever might occur with typhus, but in practice, two or more persons who had been similarly exposed should, if becoming sick with a febrile complaint nothwithstanding certain differences in the manifestations, be considered as having the same disease. He is particular on this point because, owing to some differences in the eruption and certain minor details, he has at times been told that of two members of a family sick, one had typhus and the other typhoid fever.

It has sometimes been taught that typhoid fever is not contagious, and hence that if several members of a family sicken one after the other, then if the symptoms are not decisive, this contagious nature will point toward typhus. Taken as a broad generalization of city practice, it might be held true, but unfortunately enough exceptions are met with, even in the city, to destroy its full value, while in the country we have the indirect contagion if not the direct, causing several members of a family successively to fall victims to typhoid. He has known the use of antipyrin to cause the appearance of a profuse, somewhat measly rash, which led the medical attendant to suppose that what he had previously considered typhoid was typhus fever. As regards diarrhœa, all practitioners know that not a few cases of typhoid pass through without it, and again, that it may occur in typhus, though the passages do not possess the peculiar color of those of typhoid.

Typhus fever is not alone likely to be considered as typhoid, but also to be mistaken for cerebral inflammation, and particularly for cerebro-spinal meningitis, in consequence of the occasional presence of a petechial rash in the latter. In doubtful cases optic neuritis, if present, would decide in favor of cerebro-spinal inflammation. But, notwithstanding the fact that he had had a considerable experience with cerebro-spinal fever, he had not as yet seen a single case in which the rash resembled that of typhus. In the few cases which he had seen with petechia, it had been more like that seen in some cases of malignant smallpox. Moreover, we very commonly meet herpes of the face and lips in cerebro-spinal disease, but so rarely in typhus and typhoid fever as practically to amount to an almost pathognomonic sign against these affections, if present in a doubtful case. It may occur in so many other affections, however, that its presence is of no diagnostic value, except as against the probability of either typhus or typhoid.

Fleabites occurring in typhoid fever have in some instances caused a diagnosis of typhus. So, again, has a profuse rash in which a number of *taches bleuâtres* of the French were present. He had endeavored, also, to ascertain how far it was probable that pediculi pubis were the cause of this eruption, and he intended to continue the investigation, though it was a matter in which he did not anticipate any great success.

Tuberculosis is a condition which causes not a few mistakes in the diagnosis of typhoid fever, and at times of typhus also. Meningitis is so rare a complication of typhus or typhoid fever that its existence should always raise the suspicion of another process, and more particularly of tuberculosis. If, under these circumstances, choked disk should be found on ophthalmoscopic examination, it would still further increase the probability of this affection. The next step in the diagnosis would be to ascertain if, in any point of the body, there exists a tubercular lesion accessible to proof or strong suspicion, or if from the previous history there is any probability of such a condition in the lungs. It should be borne in mind that the examination of the lungs in unconscious and particularly comatose condi-

tions is extremely unsatisfactory, so that very good examiners have supposed the lungs to be in health when making examinations in those states, while they were, in reality, the seat of far advanced phthisical processes.

If decided proof existed, as a result of a physical examination, that the lungs are the site of disease, which, from its position could be assumed to be tubercular, then it would, with the foregoing facts, be violence to evidence to call the disease typhus or typhoid unless absolute proof of their presence could be obtained, as by the eruption of typhus. Some supposed that the finding of bacilli of tubercle in the sputum would invariably decide the question between typhoid and tuberculosis, as, in cases seen moderately late in the disease without a reliable previous history, a bronchopneumonia of typhoid, and that accompanying certain cases of tuberculosis might be distinguishable by physical signs. Providing that the examination was made with care, and more particularly that every precaution was taken in collecting the sputum, to be certain that there was no contamination of the vessel or of the sputum after collection, then the presence of indubitable bacilli would be proof. But—and this was the point to which he particularly wished to direct attention—if it was supposed that any one could make the examination and decide, and if the ordinary manner of collecting sputum was employed, then there were chances for error.

Again, bacilli might not be found in the sputum from tuberculous patients, because of lack of care in selecting the proper portions for examination, and in some cases as a result of employing the short method for staining. While he had been able to make some very good diagnoses by the employment of these means, he had also met cases in which phthisis had been diagnosticated as the result of the finding of a few bacilli, yet the subsequent course of the disease or an autopsy disproved the diagnosis. There are certain things which a hasty observer might mistake for bacilli, as little crystals which appear red as the light is refracted in passing through them, not sufficiently decolorized bacteria of other kinds, etc. Dr. Janeway had, however, seen both typhoid and typhus coexistent with phthisis.

Pyæmia, and more particularly that dependent upon otitis media, and bacterial thrombosis of the lateral sinuses, caused mistakes in diagnosis, as against typhoid and typhus fever. The reason for this was, that, in the unconscious or delirious state in which patients thus affected are apt to come under observation in hospital practice, no mention was made of the old ear trouble, and no examination of the ear would be made. The irregularity of the fever, the not infrequent coexistence of meningitis or of cerebral abscess, with phenomena more or less strongly suggestive of these conditions, the history or the present observation of suppurative discharge from the ears, and that it had perhaps become foul or been arrested, tenderness or œdema over the mastoid process, and the observation of abscesses in the cellular tissue or of joint inflammation, should at once lead to a diagnosis of probable otitis media. The swelling of the little vein behind the ear and the œdema of the tissue on the mastoids might be absent in severe disease, and present where the subsequent course demonstrated that the process was not pyæmic.

In one instance, of a woman with some severe fever, which had been supposed to be typhoid, Dr. Janeway found as a useful adjuvant to diagnosis thrombosis of the internal jugular vein, giving a firm feel to the vessel. During the present year he had met with three illustrations of this malady, and in one the thrombosis of the lateral sinus was not of a completely obstructing nature, and, in consequence, the œdema behind the ear was absent. In a suspected case jaundice would point toward pyæmia or septicæmia, as distinguished from the fevers in which its occurrence is comparatively rare. Such jaundice was present in one of the three cases just referred to.

THE PRESIDENT, after alluding to the injustice which had been done a well-known practitioner of the city in imposing a fine upon him for performing his duty in reporting to the sanitary authorities a suspected case of smallpox, said that within the past three months he had been called to see a child nine years of age in whose case four physicians had already failed to make a diagnosis. The symptoms were very obscure, but resembled cerebro-spinal meningitis more than anything else. There was slight opisthotonos, but no eruption of any kind. The child died within forty-eight hours, and no autopsy was permitted. Within a week a child residing not more than a hundred yards from the last was taken with similar symptoms. He supposed that it was a case of some suppressed eruption, and ordered the child to be placed in a hot pack. As there was marked exhaustion, alcoholic stimulus was also given freely. Within three days measles developed itself, and the patient passed through a violent attack of the disease.

Three years ago he made out the diagnosis of varioloid in the case of a young lady twenty-one years of age. As the attack was a mild one, and there was a possibility of doubt about the nature of the case, he requested that an expert from the Board of Health should be called in, and this gentleman confirmed the diagnosis. Some time later, however, another physician saw the case, and he expressed the opinion that the young lady had had *varicella;* which naturally caused a great deal of disturbance.

DR. P. BRYNBERG PORTER called attention to the striking resemblance of herpes zoster of the face, when at its height, to erysipelas, and the possibility of making a mistake in diagnosis, unless one had seen the case from the beginning or took special pains to ascertain the exact history of the attack. He related a case in point.

DR. JOHN SHRADY remarked that it is often very difficult to make a positive diagnosis in cases of hemorrhagic smallpox occurring at the beginning of an outbreak of the disease, and recited cases to illustrate this. He also spoke of another class of cases still more obscure, in which the patient has a second attack of the disease.

DR. JANEWAY presented the heart and kidney of a patient who had died of

ULCERATIVE ENDOCARDITIS.

He was a salesman, twenty-seven years of age, who had had rheumatism from boyhood, and disease of the heart from at least the age of sixteen. The attack in question came on one week before his death. He had a chill, accompanied and followed by headache and pain in the back and shoulder. On the first day, the

temperature was 103° in the morning, and 104° in the evening. On the next day it was 99° in the morning, and 101° in the evening. On the third day he was affected with muttering delirium, and had epistaxis; the morning temperature being 100°, and the evening, 104°. There was no diarrhœa or abdominal tympanites.

Fourth day: Temp., A.M., 102°; P. M., 103⅘°.

Fifth day: Temp., A.M., 102⅘°; P.M., 104⅘°.

Sixth day: Temp., A.M., 103°; P.M., 104⅘°.

During this time the temperature had been more or less modified by the administration of salicylate of sodium and antipyrin. On the seventh day, on which he died, the temperature was 103°.

In this case there was a strong suspicion of typhoid fever; but when the patient was first seen by Dr. Janeway, on the sixth day, he was much more stupid than a case of typhoid would have been at that stage of the disease. On the forehead, behind the ear, and on the back and abdomen were found a few petechial points. Under the circumstances, he made the diagnosis of ulcerative endocarditis. In addition to a heart murmur, which had previously existed for a long time, a new basic murmur was now detected. On the sixth day, after Dr. Janeway saw him, larger petechiæ or hemorrhagic extravasations developed on the soles of the feet and the palms of the hands.

The specimens presented abundantly confirmed the diagnosis. There had been but one kidney, and that was the seat of numerous hemorrhagic extravasations. On the aortic and mitral valves of the heart there were well-marked vegetations. This case, Dr. Janeway remarked, served to illustrate the possibility of mistaking ulcerative endocarditis for some of the more common febrile diseases.

CINCINNATI ACADEMY OF MEDICINE.

Stated Meeting, May 24, 1886.

THE PRESIDENT, JAMES T. WHITTAKER, M.D., IN THE CHAIR.

A CASE OF ECHINOCOCCUS OF THE LIVER.

DR. JAMES T. WHITTAKER, in reporting a case of this disease, prefaced his remarks with the statement that the rarity of echinococcus in this country makes valuable every clinical report of a case, if only for the purpose of keeping alive the suspicions of the practitioner. For since the days of aspiration the diagnosis of an accessible echinococcus has become extremely simple in the presence of suspicions as to its possible existence in a given case.

Mr. H. P., aged sixty, a tall German, originally of iron frame, began to suffer from dyspeptic symptoms about two years before he came under Dr. Whittaker's observation and visited numerous physicians vainly to secure relief. The first physical examination of his case was made six months before he came under observation, when a fulness was noticed in the region of the right hypochondrium and epigastrium. The symptoms were so plainly and exclusively gastric at this time as to lead to the vague opinion of "stomach trouble" and "dyspepsia."

Mr. P. was a man but little given to notice his own sensations. He occupied an important and responsible position as foreman in a large factory and was steadily busy throughout the day. In fact, he ceased work only on the day that he came to Dr. Whittaker, and then more on account of depression of spirits than from any pain or other cause of incapacity. He had, with increasing debility which he attributed to loss of appetite, become apathetic and indifferent to his work, which had always been hitherto his chief satisfaction. In fact, he had become quite indifferent to life, and consulted another physician only to silence the entreaties of his friends.

He had little or nothing to communicate upon the first examination, though the general emaciation, sluggishness of mien and response, and sallowness of hue bespoke better than words a chronic organic disease. On exposure of the abdomen the tumor mentioned was prominent at the first glance. It was clearly in the region of the liver, the surface of which protruded regularly in every direction. Both lobes were evidently affected, as the outlines reached well over to the left hypochondrium and down to the line of the umbilicus in its most depending part. The edges of the tumor could be grasped by the fingers flexed with pressure into the abdominal walls. There was also surface œdema. It was plain that the tumor was lobular. Two quite large masses, each the size of the double fist, could be readily distinguished, as well as numerous smaller growths. One of these smaller tumors, situated just below the ensiform cartilage, fluctuated distinctly, and a deep, doughy sensation was felt in the larger growths. The multilocular character of the tumor, with the history of its slow progressive growth, and the entire absence of pain or other local distress beyond that of weight and distention, led at once to the conviction that the case was an echinococcus of the liver. With this conviction, Dr. Whittaker introduced the needle of a small stout aspirator about twice the size of an ordinary hypodermatic syringe—in fact, the veterinary hypodermatic instrument—and upon withdrawing it felt disappointed at finding it seemingly empty. But upon pushing down the piston preparatory to returning the instrument to its case he discovered that the barrel of the syringe was full. The fluid, of water-like clarity, had flowed in so easily as to have followed the plunger close on its withdrawal in the process of filling the syringe,

Dr. Whittaker took this fluid, about half an ounce, to Dr. E. W. Walker, who tested it in his presence. The application of heat and nitric acid made no, or almost no precipitate, while the addition of a solution of nitrate of silver threw down a visible deposit of the chlorides. Two rather dubious specimens of hooklets were found on microscopic search. The diagnosis of echinococcus was thus established.

The patient was absolutely averse to an operation. He now passed out of Dr. Whittaker's hands. Two weeks later the patient was bedridden and complaining of pain in the right hypochondrium. This pain disappeared in a few days under rest and hot applications, when he expressed willingness to have the largest sac emptied by aspiration, though he peremptorily refused anything like a radical operation. Accordingly, with the assistance of Dr. Bigney, Dr. Whittaker removed with the Dieulafoy aspirator about a pint and a half of fluid of the same character as the first. It was at this time that he got an indistinct sense of hydatid tremor. With the needle in the sac he now injected a half pint of a strong solution of carbolic acid. This injection was

attended toward its close with such severe pain as to compel the withdrawal of the fluid entirely, and the administration, hypodermatically, of a dose of morphia. This operation was followed by a circumscribed peritonitis, from which the patient recovered entirely only after the lapse of two weeks.

It was evident that the sac punctured had filled up completely, and that the whole mass was enlarging. There now developed considerable œdema of the feet, the interference with digestion became most grave, and emaciation progressed rapidly, with corresponding loss of strength. It was plain that death must soon occur from exhaustion.

The patient finally consented to an operation, more in the hope, as he expressed it, of securing relief even with a fatal issue. The operation was performed by Dr. Conner, whom the speaker invited to report the operation.

DR. P. S. CONNER stated that at his first examination of the patient there could be no question that a cystic tumor of the liver was present. There were two large masses recognizable, one seemingly in the right lobe of the liver, the other in the left; the smaller tumor to the left appearing to rest upon the larger to the right. Whatever may be said as to the propriety of operative measures now, there could be no question then that after a part of the fluid had been removed by aspiration and the sac had refilled, an incision was imperative. He cut down upon the liver, making the incision parallel to the long axis of the liver, about two inches in length. The peritoneum was incised, the surface of the liver exposed, and after stitches had been inserted so as to bind the cyst-wall firmly to the abdominal wall, he made an incision into the cyst with the knife. Pushing in the knife, he expected to find the fluid very quickly, inasmuch as the insertion of the hypodermatic needle had so readily withdrawn fluid, but he had to cut down an inch and a half before he reached the fluid. For three-fourths of the time that the man lived after the performance of the operation his condition steadily improved from day to day; but for forty-eight hours before his death he became weaker and weaker, until he finally passed away.

The examination of the tumor, after removal, proved positively that no operation could have been of any benefit. At least twenty-five large cysts were found, and a great many more of smaller size. Fortunately, hydatid cysts are usually single, or there are at most two or three cysts lying closely together. Where the latter condition is found, surgical procedure promises better results than where there are several cysts, or a great many, as in the case under consideration.

GENESIS OF ECHINOCOCCUS.

DR. R. W. STEWART, in opening the discussion of this branch of the subject, remarked that he would confine himself to the theory and explanation of the birth and production of the echinococcus.

Probably no class of diseases, no pathological new growth, no microörganism has ever given such apparently complete and perfect support to the theory of spontaneous generation as that formerly known as hydatid disease, and now known as echinococcus cyst, for here was a growth in a closed sac within a closed organ, completely shut off from the external air. It grew, and had no counterpart in the outside world. Ova were sought for but were never found; organs of generation were sought for when no such organs existed. There could be nothing else but spontaneous generation until Steensteup, in 1842, made his observations upon the cercariæ, and discovered that "some of the entozoa, by a non-sexual process, undergo that peculiar form of multiplication in which the immediate progeny of development from the ovum is dissimilar from the parent, but produces without the aid of sexual organs another progeny which either itself or by repetition of an analogous process returns to the parental form" (Allen Thompson). This process is called alternate generation, or metagenesis, and is beautifully demonstrated in the transformations from tænia echinococcus to echinococcus cyst, and from this again to tænia echinococcus. Spontaneous generation receives its death-blow from the very thing which formerly appeared to give it its most prominent support.

The echinococcus is the larval state of the tænia echinococcus, the family history of which may be traced out from the tæniada to the scoleida, radiata, invertebrata (Huxley).

The tænia echinococcus, one of the smallest of our animal parasites, measures about four millimetres in length, and consists of a head and three segments. The last segment contains both organs of generation, and is probably a self-fertilizer. It is larger than the other parts of the worm taken together, and after fructification contains probably five thousand eggs, each of which contains an embryo. The mature tænia does not interest us further in this connection apart from the fact that shortly after fecundation the last segment drops off from the worm and finds its way into drinking water or upon green or ripe vegetables, and is then taken into the stomach of man or other animals, while a new segment is developed in its place and goes through the same process. The separated segment may burst in the intestine of the dog and the freed ova be deposited with the feces in the manner mentioned. When an ovum reaches the human stomach its dense, tough, oftentimes calcareous husk or shell is dissolved off by the action of the gastric juice, and a fully armed embryo carrying six hooklets and about three times the size of a human blood-corpuscle, is set free. This embryo is simply a vesicle or bag with spikes arranged about one end. It bores its way through the stomach wall or may pass down into the intestine and bore through that, or make its way through the ductus choledochus or into the portal vessel, and may thus reach the general circulation and be carried to any organ. The process of growth or development through which it goes after reaching the liver will best answer our purposes of demonstration. The embryonic vesicle after reaching the liver substance increases in size, but does not begin to proliferate for from two to five months. This growth consists in the formation of one large cyst, with walls containing various concentric layers and an outside sheath which is formed from the liver substance. The innermost layer is granular in character and covered internally with ciliated epithelium. This layer becomes thickened in places and gradually forms hollow elevations—the brood-capsules—or it may throw up these elevations and produce out of them daughter cells which, in turn, are to all intents and purposes like the mother-cyst, and

which go through the same process of proliferation, as follows: From the surface of the capsule glove finger-like processes project into the brood-capsule. These are the scolices, the first formation of the head of the future embryo. From this description it will be seen that a scolex is simply a hollow in the brood-capsule, communicating with the general cavity of the cyst and projecting into the brood-capsule.

The scolex soon begins to show at its free end a double row of hooklets and four suctorial prominences to form the head of the embryo. After a time a constriction appears just behind the suckers, and this constriction becomes thinned out into the neck. So long as the scolex remains attached to the capsule-wall, and the constriction is not too great, it can turn itself inside-out and project then not into the brood-capsule, but into the general cavity of the mother cell. This is the course as found in the lower animals; usually, however, in man, the inner or granular layer develops into a number of daughter cells, which protrude into the general cavity of the mother cell—endogenous growth—producing thus the peculiar aggregation of grape-like bodies so characteristic of hydatids. The process of development in the daughter cells goes on just as was described for the mother cell.

The daughter cells vary in number from very few to several thousands, and each brood-capsule contains nine or more embryo.

We have now traced the echinococcus from the ovum to the scolex of the encysted parasite, and have found that the scolex is the embryo, and consists of head and neck. The question naturally arises, How do these embryos develop into the mature worms? If the cyst remain in the body the embryos remain alive as long as they are attached to the cyst wall, or rather to the wall of the brood-capsule. Very little if any further development takes place, except perhaps a slight transverse marking to show the boundaries of the future segments. If, however, the organ in which this cyst exists be eaten by an animal in the intestinal tract of which development can take place (and as yet the dog and wolf are the only ones in which this can occur), the head resists digestion in the stomach, passes into the duodenum, affixes itself to the mucous membrane and then develops into the mature echinococcus.

If the cyst remain in the liver or other organ of the host the embryos develop, as already described, in the brood-capsules and either die and become cast off into the cavity, or they, in turn, develop into daughter cells and produce embryos, and thus make the process an almost continuous one, and one of which the limits of growth are the limits of the organ and its surrounding tissues.

DR. A. G. DRURY said that the tænia echinococcus is the smallest of all the tapeworms, not exceeding a quarter-inch in length, and having four segments, including the head. The last segment exceeds in length all the rest of the worm. It is the only one having reproductive organs; and these include both the male and female organs. There is still some doubt as to the manner in which the female organs are impregnated. Leuckart thinks it is effected by the male organs of the same joint, others suppose that two joints come into contact and are mutually impregnated. It does not appear that the ova are ever discharged through the vagina. They are too large to pass in that way. They remain in situ until the joint is ruptured. This may happen within the intestine of the animal, or after its discharge from the bowels. This tapeworm is found only in the dog, wolf, and fox. It produces thousands of eggs. Within the egg an embryo is formed which is a globular body, provided at one part of its circumference with six delicate hooks, arranged in pairs. This is enclosed in a thick shell which, in some species of tapeworm consists of several layers. These eggs cannot get beyond the embryonic stage in the body of the dog. The eggs are passed with the feces, which become dry and crumble into dust, and the eggs adhering to the dust are blown into gardens and orchards and become attached to vegetables and fruits, much of which is eaten unwashed and uncooked. The echinococcus cysts are developed from these six-hooked embryos. They are found in the lungs, kidneys, bladder, bones, neck, and other parts of the human body, though much more rarely than in the liver. When a man or other animal swallows the ova the shell is dissolved by the digestive juices and the embryos escape. They then bore their way through the coats of the digestive canal, and getting into the bloodvessels are floated along with the current to the liver or other organ suitable to their development.

The reason for the greater frequency of hydatids in the liver probably is that the embryo in boring through the walls of the intestine or stomach generally gets into the rootlets of the portal vein, and is carried into the main trunk and arrested in one of the capillary branches within the liver. Here, again, it probably bores its way out of the vessel into the surrounding tissue where it is eventually arrested. Having reached its permanent home it begins a new stage of development. It loses its hooks, becomes larger, and from being solid becomes a vesicle containing a transparent fluid. From this time it presents the character of a more or less globular vesicle or bladder. Before its relation to the tænia echinococcus was known, it was called the bladder-worm. It gives rise to changes in the surrounding tissues. It becomes surrounded by a layer of granular matter which is an exudation from the tissues of the host; and soon after by a fibrous layer abundantly supplied with vessels. Henceforth the hydatid is always enclosed in this membrane, which is termed its capsule. This capsule grows with the growth of the contained hydatid, fitting closely to its exterior and giving it the support it needs. It is from the vessels of the capsule that the embryo is nourished. After a time the growing vesicle begins to show a projection from some part of its inner surface, and this gradually increases in size and becomes pear-shaped. Soon four suckers make their appearance in the interior of this body and sometimes a circle of minute hooks. After a time a kind of neck is developed. It then looks like the head of a tapeworm suspended within the bladder or vesicle. Up to this point the development of an echinococcus is the same as that of the cysticercus. The further steps are different. The cysticercus, in order to complete its development, would have to form only a single head in its interior. This head would grow as a kind of bud or protrusion from one part of the interior of the cysticercus, and would gradually become provided with its two rows of hooklets and suckers. In the echinococcus, instead of a single protrusion, a number of them form at differ-

ent times from the interior of the animal. Each of these buds does not form a head, but itself becomes a cystic body, which for a time is attached by a pedicle to the spot where it started, but soon becomes detached. This is called a daughter cyst. Each daughter cyst may develop one or more granddaughter cysts in its interior. In this way the echinococcus becomes filled with a number of smaller vesicles of various sizes which may amount to thousands. It will be observed that the difference between a cysticercus and an echinococcus is that, whereas the former gives rise to one head, and can ultimately form a single tapeworm only, the latter may develop thousands.

Sometimes, though exceedingly rare in the human subject, instead of budding internally to form daughter cysts, it forms external protrusions. In this way the liver may become riddled with hydatids not contained in any mother-cyst, but penetrating the liver in all directions.

(To be continued.)

CORRESPONDENCE.

THE MUNICH MEETING OF THE GERMAN GYNECOLOGICAL CONGRESS.

THE session opened at Munich, on June 16, 1886, with a social gathering in the Hall of the Kunstgewerbe House, at which about fifty prominent gynecologists were present, and the regular business commenced on the morning of the next day at 10 o'clock, in the clinic room of the maternity. Sixty members were then present, and the chair was occupied by Prof. Winckel, Prof. Küstner acting as Secretary. Among those present were Prof. Kaltenbach, of Giessen, Prof. Müller, of Berne, Prof. Fehling, of Stuttgart, Prof. Schatz, of Rostock, Prof. Winckel, of Munich, Prof. Küstner, of Jena, Dr. Sänger, of Leipzig, Prof. Credé, of Leipzig, Prof. Scanzoni, of Würzburg, Prof. Olshausen, of Halle, Prof. Slavyansky, of St. Petersburg, Dr. Frommel, of Munich, Dr. Kehrer, of Heidelberg, Dr. Krukenberg, of Bonn, Dr. Skutsch, of Jena, Dr. Stumpf, of Munich, Dr. Veit, of Berlin, Dr. Hofmeier, of Berlin, Dr. Freund (the younger), of Strassburg, Dr. Elischer, of Buda-Pest, Dr. Donat, assistant to Prof. Credé, and many other faithful workers in the gynecological field. Prof. Paul F. Mundé, of New York, and the writer, were the only representatives not of the Continent of Europe.

The meetings throughout were most admirably conducted by the ready judgment and excellent tact of the chairman, Prof. Winckel. In looking over the assembled heads only two were gray, one belonging to the still wiry figure of Herr Geheimrath Credé, and the other to the portly one of old Prof. Scanzoni. Many of the others, whose names are already well known abroad, are young men.

Prof. Winckel, in opening the meeting, extended a cordial welcome to all the members, particularly those who had come from great distances; he alluded to the recent sad death of the King of Bavaria, and stated that had there been time to notify the members the meeting would have been postponed, both out of respect, and because the whole town was at present in mourning.

Prof. Müller, of Porro-Müller reputation, then delivered the first address. No essays were read, the members either using brief notes, or speaking entirely from memory, and their delivery was for the most part energetic and impressive. Prof. Müller spoke upon the "After-treatment of Grave Laparotomies." He referred to shock, embolism, and coprostasis, but considered one of the greatest of all dangers to be extensive adhesions of the intestines to areas of the anterior abdominal wall which had been extensively denuded. To avoid this he advised a forced injection of a sterilized salt solution into the peritoneal cavity so as to keep a water-pad on the raw surface until it should glaze over, when the water was to be let out again.

Prof. Schatz stated his belief that adhesions were much more common than believed, and considered the use of opium contraindicated.

Prof. Kaltenbach said that adhesions were, in times past, vastly more common, being due to imperfect toilet, and often to abrasions of the epithelium by the cleansing sponge. Since using the bichloride he has seen no adhesions.

Dr. Sänger said he believed adhesions were the rule, that they do no harm, and that injections will not prevent them.

Prof. Müller replied that he always used sublimate solutions and had adhesions in spite of them.

Dr. Bayer, of Strassburg, then delivered a finished address upon "Placenta Prævia," containing many new theories of his own elaboration which provoked some active opposition on the part of the members.

Dr. Frommel, of Munich, delivered an address upon the "Histology of the Fallopian Tube," which was well illustrated by plates and slides; he had devoted special attention to the epithelium, and to the development of the plica.

Prof. Fehling, of Stuttgart, brought before the members the results of a critical study of the "Relation between the Amount of Hæmoglobin in the Amnion and in the Mother's Blood," showing a constant relation.

Dr. Sänger next introduced to the attention of the Society a new field for pelvic exploration, the "Palpation of the Ureters, with Demonstrations." He showed that the examining finger in the vagina could feel one or both ureters in about eighty per cent. of all cases, and in a much larger percentage of pregnant women, and that in pyelonephritis such a demonstration often determined a one-sided thickening, and a ureteritis pointed distinctly to the affected side, as he had in several cases proved. Prof. Winckel furnished six pregnant women for a demonstration, which was made to the satisfaction of all present.

Prof. Kaltenbach exhibited some hypertrophied ovaries, and a uterus four and a half months pregnant, with a myoma as large as a cocoanut.

He also delivered an address upon the subject of "Prophylaxis of Ophthalmoblenorrhœa of the Newborn." The percentage of disease in neglected cases he stated to be enormous. To insure protection he combines two methods, both cleansing the vagina and washing the eyes of the child in a sublimate solution.

Prof. Olshausen considered the nitrate of silver solution by far the best. In two hundred cases so treated, he had had but one one slight catarrh, and that was innocuous.

Prof. Leopold, of Dresden, spoke of the technical difficulties in effectually cleansing either vagina or eyes.

Prof. Credé, speaking from his enormous experience, had had perfect results from the use of the nitrate of silver solution; in two years in the Leipzig Lying-in Hospital they had had but one case of ophthalmoblenorrhœa.

Dr. Stumpf, of Munich, delivered an excellent address, being a digest of a series of well-studied cases of puerperal convulsions.

Dr. Sänger's paper on the "Relation of Gonorrhœal Infection to Puerperal Diseases," was again a most valuable contribution, showing that latent gonorrhœa may produce no serious evidences of its presence until after childbirth, when an active peritonitis or pyosalpinx may quickly arise. He considers gonorrhœa a most frightfully common malady, and for diagnosis rests upon clinical features, the coccus being an utterly uncertain and unreliable point. In tracing back one suddenly arising puerperal peritonitis, he found that one of the children had had ophthalmia, and that the husband had had gonorrhœa.

Dr. Gräfe, of Halle, cited a case from his private practice.

Prof. Kaltenbach had traced a case through an intervening endometritis.

Dr. Sänger does not believe that endometritis is a necessary or usual preliminary.

Dr. Bumm insisted that the diagnosis of gonorrhœa could not with any certainty be established until the coccus had been found. He claimed that all types were mimicked by catarrhs, and insisted further upon the ease with which the microscopic examination could be made. The gonococcus is only found very superficially in membranes; the coccus found in glands and abscesses is the staphylococcus aureus.

Prof. Winckel made some remarks as to the negative nature of culture-work and experimental pathology in this direction.

The meeting then closed for the first day, with the announcement that the next meeting would be held in two years in Halle, with Prof. Olshausen in the chair, and the following members, now present, as officers, Profs. Gusserow, Schatz, Kaltenbach, Küstner, and Schwartz.

On Friday morning, June 18th, the meeting reopened with an address from Dr. Elischer, of Buda-Pest, on the "Use of Iodoform in Laparotomy." He considered this a dangerous agent, and one not to be used in the abdominal cavity. The members in reply disagreed with the speaker entirely.

Prof. Olshausen considered a dusting of iodoform a most valuable expedient in cases of tubercular peritonitis.

Prof. Schatz, of Rostock, made a novel address upon "Sores of the Bladder and their Cure." He cited a case where he cut down into the bladder above the pubes, cut out a "sore" and brought the resected parts together, thus attaining a successful result.

Dr. Zeiss, of Erfurt, detailed some cases of Alexander's operation, which provoked a general discussion, and a very interesting reply from Prof. Mundé. Sufficient time, however, had not elapsed since Dr. Zeiss's first case, and the constant necessary (?) use of a pessary was regarded with much suspicion.

Prof. Mundé stated that where he had succeeded perfectly in finding the ligaments, his results had been typical. He considered the operation one of great value in a limited field.

Dr. Skutsch exhibited a "New Instrument for Obtaining Measurements of the Internal Oblique and Transverse Diameters of the Pelvis." It consists of a board, fastened to the pelvis by straps resting upon the pubes and the anterior superior iliac spines. Just over the pubes are two sockets which receive two long fingers of lead. In use, one of these fingers is attached to a socket, and is then carried by its free end upon the index finger up into the pelvis and pressed high up against the ileo-pectineal line. The lead retains the curve impressed upon it on being removed, the same is done with the other finger of lead for the other side. The apparatus is then removed, the fingers are reattached, and the transverse pelvic diameter is the distance between the free ends.

Prof. Küstner then exhibited a pair of tongs like old hair-crimpers, which are intended to be carried high up in the vagina and separated, an arc at the handles indicating the divergence and, therefore, the diameter in question.

Dr. Firnig then narrated a case of Cæsarean section and exhibited the pelvis which was extremely narrowed by rachitis.

The number of addresses to be delivered on Saturday was so large, that no discussions were allowed, and the members were obliged to time themselves.

Prof. Küstner brought before the meeting his results in the "Treatment of Lacerated Perineum by Different Methods," with an estimate of the relative value of the various procedures. He spoke particularly of the operations of Hegar, Freund, Simon, Bischoff, Winckel, and Fritsch; he also detailed some interesting experiments with a twenty per cent. solution of hydrochlorate of cocaine on three cases.

Prof. Olshausen next spoke of the "Nutrient Value of the Amnion."

Dr. Wyder's address was upon the "Changes in the Uterine Mucosa Consequent upon the Presence of Submucous, Subserous, and Interstitial Myomata Respectively." He exhibited some interesting drawings and sections.

Dr. Hofmeier, of Berlin, presented three very interesting specimens to the Society. 1. A tubal pregnancy in the second month. 2. A uterus with large subserous myomata successfully removed. 3. A uterus from a case of eclampsia showing contraction ring.

Prof. Schwartz spoke upon the total extirpation of the uterus for cancer: Dr. Battlehner, upon the healing of cervico-vaginal lacerations.

In conclusion, Prof. Credé moved that the Society express its most cordial approval of Prof. Winckel's efforts in inviting and accommodating the members, and that they should signify their assent by all rising, which was done. The Society then adjourned for two years. Most of the members remained in the city the rest of the afternoon to witness the funeral of King Ludwig.

HOWARD A. KELLY, M.D.

LEIPZIG, June 23, 1886.

NEWS ITEMS.

VIENNA.

(From our Special Correspondent.)

THE APPOINTMENT OF A SUCCESSOR TO PROFESSOR SPAETH.—Medical men in Vienna have been awaiting

with interest the announcement of the appointment of a successor to Professor Spaeth, in the second clinic for obstetrics. As candidates, were mentioned Prof. Gustave Braun, who has charge of the third clinic—that for midwives—and also Prof. Breisky, from the Lying-in Hospital of Prague. The first-named candidate was supported by the influence of his brother, Carl Braun; the second by some others of the hospital Faculty. After a shorter time than is usually given to the consideration of such appointments, the Emperor and the Ministers returned the name of Prof. Breisky, quite to the surprise of many, who thought the influence of Carl Braun sufficient to secure the appointment of his brother. The Prague Clinic has a beautiful building, and is in fine condition, and Prof. Breisky has been most successful in his teaching and practice. He will be welcomed to Vienna by many friends and admirers. Prof. Spaeth was retired with abundant honors, including a decoration from the Emperor. As a friend and follower of Semmelweiss, he was one of the first to recognize the value of the latter's theory regarding puerperal sepsis, and his influence and work have been on the side of conservative midwifery. His clinic has at present attained as high an order of excellence as is possible in so old a building with the present system of attendants and the large number and character of patients. This result is owing to the personal attention of the assistants, and the following statistics of the year 1885 may prove of interest, as showing the results obtained in this clinic:

Number of births	2761
Labors ending spontaneously . .	2456
Abnormal labors	305
Percentage of septic deaths, $\frac{57}{100}$ths of 1 per cent.	

This is but one-third of the material in the Vienna Hospital, the remainder being divided between the brothers, Professors Carl and Gustave Braun.

THE AMERICAN NEUROLOGICAL ASSOCIATION will hold its annual meeting at the Howland House, Long Branch, N. J., on Wednesday, Thursday, and Friday, July 21, 22, and 23, 1886. Two daily sessions will be held, one in the morning from 10 A.M. to 1 P.M., and one in the afternoon from 3 to 5 P.M.

THE AMERICAN OTOLOGICAL SOCIETY will meet at New London on Tuesday, July 20th.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY will meet at New London, on Wednesday, July 21st.

AN INTEMPERATE ABSTAINER.—An unfortunate teetotaller some months ago attended a temperance lecture, and was there informed that ammonia was the best substitute for alcohol. Having a pain in the chest, he took a tablespoonful of the drug, which caused his death after great agony. At the inquest the jury returned a verdict of accidental death.

ABSENCE OF RABIES IN BUENOS AYRES.—In an article published in the *Revista Med. Quirurg. de Buenos Ayres*, Dr. J. Franceschi states that no case of rabies has been observed in that province during the past fifteen years, although the proportion of dogs kept there is larger than in any European country. He believes that rabies may be produced idiopathically in dogs by feeding them on vegetable food exclusively. In Europe meat is scarce and hydrophobia correspondingly common, but in Argentine Republic meat is the common food of dogs, and hydrophobia is unknown.

A NEW LUNATIC ASYLUM is to be established in the northern part of the State of New York. Among the commissioners appointed to choose its situation are Dr. P. M. Wise, of the Willard Asylum, and Dr. J. M. Cleveland, of the Hudson River State Hospital at Poughkeepsie.

THE YALE MEDICAL SCHOOL.—It is announced that Dr. James Campbell, of Hartford, has been appointed Professor of Obstetrics.

THE UNIVERSITY OF VIRGINIA.—Dr. W. B. Towles has been elected Professor of Anatomy.

PERSONAL ITEMS.—Dr. Louis A. Duhring, of Philadelphia, and Dr. Joseph W. Howe, of New York, sailed for Europe on Saturday, the 26th ult. Dr. Fordyce Barker, of New York, Dr. John S. Billings, U. S. A., Dr. James R. Chadwick, of Boston, and Dr. H. P. C. Wilson, of Baltimore, sailed on Thursday, July 8th.

LAFAYETTE COLLEGE, of Easton, Pa., has conferred the degree of LL.D. on Dr. Henry D. Swift, of the University of Pennsylvania, and the degree of A.M. on Dr. J. Clinton Edgar, of New York.

SIR JAMES PAGET has just been elected a foreign associate of the Academy of Medicine of Paris, by 57 votes out of 64. Dr. Charles West, of London, and M. van Beneke, of Brussels, were the other candidates.

A PASTEUR INSTITUTE IN MILAN.—Milan is the first of Italian cities to turn M. Pasteur's experiences to practical account. Dr. Barattieri has returned to Milan from Paris, after having spent three months at the Pasteur laboratory, where he has been well initiated into the orthodox method of combating hydrophobia, taking with him a quantity of virus and several of the animals already operated upon by the great French scientist. After a consultation between the directors of the Scuola di Veterinaria and others, it has been decided to found a Pasteur Institute in Milan, the expenses of which are to be defrayed by the municipal authorities and the Government. Meanwhile, Dr. Barattieri has been accommodated with a temporary laboratory, where he is to commence active operations in the course of a week or two. Dr. Ullman, of the University of Vienna, who has also spent several weeks in the laboratory of M. Pasteur, has returned, taking with him some of the virus with which he proceeded to inoculate his first batch of patients, consisting of thirteen men and one woman, all said to have been bitten by rabid dogs.

PROFESSOR VIRCHOW recently completed the thirtieth year of his occupancy of the chair of Pathological Anatomy at Berlin.

DANGERS OF PERAMBULATORS.—Dr. Maclagan, the medical officer of the Hexham Rural Sanitary District, England, while calling attention to the fact that in his

district 124 children out of 1000 die during their first year, attributes much of the mortality to "inflammatory diseases, cerebral and pulmonary," caused by exposure in perambulators. Dr. Taylor, of Scarborough, also lays much stress on the matter of wind-pressure to which the perambulator exposes children, in the causation of diseases of the throat and chest.

HONORS TO DR. DALTON.—The degree of LL.D. was conferred upon Dr. John C. Dalton, President of the College of Physicians and Surgeons, New York, by Princeton College, at its recent commencement.

SCIENTIFIC SEWERAGE FOR PHILADELPHIA.—At a meeting of the Board of Health of Philadelphia a few days ago a petition was presented by Dr. Ford from a number of citizens, who he stated represented over a hundred millions of dollars, in favor of an improved sewerage system, and offered the following, which was unanimously adopted: "*Resolved*, That the Board of Health of Philadelphia earnestly request City Councils to give prompt and favorable consideration to the petition of citizens praying for the authorization of a thorough scientific investigation of the sewerage system of the city, with the object of discovering and correcting the radical faults connected therewith."

ELECTION OF DR. BROWN-SÉQUARD TO THE ACADEMY OF SCIENCES.—Dr. Brown-Séquard was elected a member of the Paris Academy of Sciences at its last meeting on June 21st, in the Section of Medicine and Surgery. The eminent biologist was elected by a large majority, and the victory was the more creditable as the competitors of Dr. Brown-Séquard were all men of note, in proof of which statement may be mentioned the names of Germain-Sée, Bouchard, Jaccoud, Hayem, and Richet.

SPONTANEOUS TRANSFORMATION OF MORPHINE INTO APOMORPHINE.—A solution of hydrochlorate of morphine for subcutaneous injection (three per cent.) was ordered for a patient, and its injection was promptly followed by relief of the pain, without any gastric symptoms whatever. Eleven months later, the patient made use of the same solution; but, this time, the injections gave rise immediately to violent and uncontrollable vomiting. The solution was given to a well-known analyst at Paris for examination, and he ascertained that apomorphine was present, thus accounting for the sickness. He recommended, in consequence, that solutions of the salts of morphine should never be kept longer than four weeks, and that freshly prepared solutions should not be mixed with the old.

MODE OF PAYMENT OF FEES IN VIENNA.—In Vienna it is usual to give medical men their fees at the end of the attendance, so that when honoraria are offered the hint is understood and no more visits are paid without further request. Some time since a practitioner was sent for to see the child of a certain tailor, whom he found suffering from fever, but with no signs enabling a diagnosis to be made. The fee was given, and the doctor hearing nothing further, did not consider his services were required again. However, it was discovered by the police, shortly afterward, that some of the children in the tailor's house were suffering from small-pox. The tailor and the doctor were both summoned, the latter being acquitted, while the former, who was shown not only to have concealed the existence of the disease, but to have taken in work at the time, was sentenced to ten days' imprisonment.

POISONOUS GLOVES.—The *Provincial Medical Journal* says: "We have recently had several cases of a peculiar herpetic eruption about the lips of children, and which we have satisfied ourselves were due to cheaply dyed gloves. The children wearing these gloves rubbed their mouths with them. The rash could be produced at will. When the gloves were taken off and not worn for some time, there was no rash. When, on the other hand, the gloves were worn, and the children repeated the practice, the rash returned. Clearly it was a case of cause and effect. Owing to competition, manufacturers endeavor to cut down the expenses of production by using the cheapest form of dye; and the public support them by buying cheap products."

NOTES AND QUERIES.

CATGUT SUTURES FOR OPERATIONS UPON THE LACERATED CERVIX UTERI.

To the Editor of THE MEDICAL NEWS.

SIR: In THE MEDICAL NEWS for July 3, 1886, Dr. Sutton gives the history of fifty cases of lacerated cervix which were operated upon by him, and in which silkworm gut was used as the material for sutures. There can be no doubt that silkworm gut is better than silk, and that silk is better than silver wire; but why is it that gynecologists persist in using *sutures which must be removed?* General surgeons wash out the vagina with peroxide of hydrogen solution, or with bichloride of mercury solution, insert sutures of antiseptically prepared catgut, sprinkle iodoform over the vaginal mucous membrane, and make no calculations for disturbing the sutures again until another laceration occurs.

ROBERT T. MORRIS, M.D.

NEW YORK, July 10, 1886.

PIG-BACKED KIDNEY. A CORRECTION.

To the Editor of THE MEDICAL NEWS,

SIR: I notice an error in the report on my remarks on the "pig-backed" kidney of alcoholism, read before the Association of American Physicians, and published in your issue of July 3, 1886, page 18. You would greatly oblige me by inserting in your columns this correction:

"The kidneys, in sudden death from typical alcoholism (a cyanotic induration designated from its shape as the *pig-backed* kidney) are one-third to one-half *larger*, and sometimes double their normal size;" instead of, "is one-third to one-half its normal size," as the reporter gave it.

Very respectfully yours,

H. F. FORMAD.

UNIVERSITY OF PENNSYLVANIA,
July 10, 1886.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT OF THE U. S. ARMY, FROM JULY 6 TO JULY 12, 1886.

PAGE, CHARLES, *Lieutenant-Colonel and Surgeon.*—Leave of absence further extended one month—*S. O. 156, A. G. O.*, July 8, 1886.

WATERS, WM. E., *Major and Surgeon.*—Ordered for duty as Post Surgeon, Fort Spokam, Washington Territory.—*S. O. 112, Department of Colorado*, July 2, 1886.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

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